

Member Associated Business
Papers, Inc.**The Newspaper
of the Industry**Member Audit Bureau
of Circulations.**AIR CONDITIONING AND
REFRIGERATION**Issued Every Monday at
450 W. Fort St., Detroit 26, Mich.**March 22,
1948**

Vol. 53, No. 12, Serial No. 992

Established 1926.

Reentered as second-class matter October 3, 1938 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office. Copyright, 1948, by Business News Publishing Co.

INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week**Total Steel Taxes Exceed Profits
Report on England
Lifted from the Mailbag
What Is a Customer?
Aesop, 1948****Story of the Week**

On a dark and stormy night a priest was walking home from church when suddenly a gun was jabbed rudely into his ribs.

"Fork over your dough, and reach for the sky," growled the stick-up man.

When the priest raised his arms, his white clerical collar was revealed.

Noticing this badge-of-divinity, the thug became quite embarrassed. He apologized profusely.

"We'll just forget about it, my good man," murmured the forgiving Father. "Here's a cigar for you—just to show that there are no hard feelings."

"Oh, no, I couldn't take dat," demurred the crook. "I never smoke during Lent!"

**Total Steel Taxes
Exceed Profits**

During the 12 years 1935-46, tax collectors received more money from the steel industry than the industry earned as its net profits, the American Iron & Steel Institute reveals. Tax payments by the industry during that period totaled over \$3,737,000,000, whereas the industry's profits totaled about \$2,243,000,000. Average annual tax payments were \$311,000,000, while average annual earnings amounted to \$187,000,000.

Since the inception of Social Security in 1936, the steel industry has paid more than \$526,000,000 into federal and state funds for this purpose up through 1946. State and local tax payments for the 1935-46 period approximated \$827,000,000. The remainder went to the federal government.

Three-quarters of these taxes were paid during the five war years 1941-45; and the industry earned about 50% of its 1935-46 profits during the same five-year period.

Point your own moral.

Report on England

Government restrictions are hampering production of refrigeration equipment in England, in the opinion of E. C. Raney, president and general manager of Ranco Inc., Columbus, Ohio, pioneer manufacturer of refrigeration controls.

Mr. Raney has just returned on the Queen Mary from a lengthy visit in England, where he studied manufacturing problems.

Industry is suffering from restrictions imposed by the British government, Mr. Raney tells us. All production is done under government allocation and approval.

The British Ministry of Supply grants manufacturers quotas and allocations, which are reviewed and revised every three months. Uncertainty about government plans makes manufacturing efficiency difficult, Mr. Raney avers.

At present, three fourths of the domestic refrigerators and half of commercial refrigeration equipment manufactured in England must be exported.

Design of this refrigeration equipment is patterned after American models. The manufacture of hermetically sealed compressors in England has begun only recently, Mr. Raney tells us.

Higher taxes and higher material
(Concluded on Page 6, Column 1)

**Hamper President
Of Coolerator Co.****L. W. HAMPER**

DULUTH, Minn.—Heading the Coolerator Co., manufacturer of electric refrigerators and home freezers, will be L. W. Hamper, who has been named president, and William J. Browne, who was elected vice president in charge of sales.

Election of new officers and directors was held in a special meeting of the stockholders called here following the sudden death on Feb. 28 of John H. Ganzer, who has been associated with Coolerator since 1921, and was slated to continue as president following the purchase of the capital stock by the Gibson Refrigerator Co. "As previously announced at the time of the purchase of Coolerator by Gibson," Hamper said, "the company's policies will remain unchanged, and Coolerator will continue"

**Elimination of More
'Marginal' Dealers
Predicted for 1948**

NEW YORK CITY—The long-anticipated "shakedown" to eliminate a large number of appliance dealers "who should never have entered the business" has begun and exits from the retail field will mount from now on, the *New York Times* declared last week in a story based on interviews with heads of distributing and retailing organizations.

An executive of one distributorship was quoted as saying that failures will be limited to dealers who are poor business managers with inadequate financing and "who are baffled by the need for aggressive selling and promotion which is characteristic of the intense competition in the appliance business."

It was stated that credit managers of distributing organizations have clamped down on "shaky" accounts since the first of the year, and are predicting that the number of dealers in New York City will be reduced by 25% by the end of the year.

The *Times* quoted one dealer with 25 years' experience as saying:

"The situation of inexperienced independent dealers who work on the so-called floor plan basis is particularly serious. They are financed by various financial agencies peculiar to the appliance field on majors and must pay for traffic appliances out of their own cash reserves or from proceeds from sales of majors."

"As long as the majors sold as quickly as they reached the sales floor, traffic appliances were paid for, obligations to lenders were met, and everything was rosy. But now that inventories of majors are piling up, they are in a corner and do not know where to move."

**Canadian R.S.E.S.
Toronto Meeting
Opens March 30**

TORONTO, Ont., Can.—Six talks covering varied aspects of refrigeration applications and problems will be presented at the educational sessions in the two-day annual convention of the Interprovincial Association, Refrigeration Service Engineers Society, to be held March 30 and 31 in the King Edward hotel here.

In addition, the convention will elect new officers, hold its annual dinner-dance, put on a Monte Carlo party, and hear a luncheon address by Harold G. Stern, recently elected president of the Refrigeration Equipment Wholesalers Association.

Practical problems in refrigeration servicing will predominate the educational program announced by A. E. Doan, educational chairman, but others of interest will include a discussion of refrigeration in medicine and surgery by a surgeon from the University of Toronto, and a talk on the behavior of materials near

(Concluded on Back Page, Column 1)

**Frozen Food Industry
Warned To Get Out
Of 'Cadillac Class'**

CHICAGO—Frozen food inventories have now been brought back into balance and the outlet for the industry for the next three to five years is "exceptionally optimistic," C. Courtney Seabrook, retiring president of the National Association of Frozen Food Packers, told the opening session of the National Frozen Food Industry Convention and Exposition here.

But Burton L. Prince, retiring president of the National Wholesale Frozen Food Distributors, Inc., warned at his group's concurrent convention that the industry lacks "a large enough consumer acceptance to give us a steady market." He urged adoption of an industry-wide education and promotion program to increase per capita consumption of frozen food.

Need for cooperative action to get frozen food "out of the Cadillac class" was also cited by Alvin Langfield, new first vice president of N.W.F.F.D., in separate talks to the general convention and to the distributors. He said increased volume and refinement of operation are essential to reduce distribution cost from a present average of around 18% to a maximum of 10%.

The industry convention and exposition was held March 15 to 18 at the Hotel Stevens under sponsorship of N.A.F.F.P. An estimated 3,200 packers, distributors, brokers, and retailers were in attendance.

Exposition visitors looking over the 59 exhibits found a few new refrigeration products shown for the first time. Some other new items were announced but not displayed.

Seabrook said frozen foods is the first segment of the food industry to complete its conversion from wartime production and distribution to a peacetime economy. He attributed part of the conversion to record consumption of frozen foods in 1947.

"After the reduction in the total pack in 1947," Seabrook said, "the industry is expected to resume its upward trend in 1948 and may sur-

(Concluded on Page 29, Column 1)

**Set Dates for 1949
ASHVE Convention**

BUFFALO—The executive committee of the American Society of Heating & Ventilating Engineers voted at a meeting in Hotel Statler March 13 to hold the group's 1949 convention in Chicago, Jan. 24-28.

**Coal, Meat Strikes May Have
Effect on Refrigeration Field****Previous Threats to U.S.
Meat Supply Boosted
Freezer, Locker Sales**

CHICAGO—Strike of the C.I.O. meat packinghouse workers may result in increased sales activity in the home freezer and frozen food locker plant fields.

Threats of meat shortages in the past have boomed sales of home freezers and have increased the public's interest in the use of locker plants. A short time back the rush of meats to private storage was blamed for a resulting shortage and higher prices, and just a few days ago R. J. Eggert, associate director of the American Meat Institute's department of marketing, declared that "threats of rationing coupled with irresponsible talk about an impending meat 'famine' stimulated the accumulation of locker and pantry stocks of meat."

Meat supplies in warehouses and retail stores are good for about two weeks, but they might go faster than that if any panic buying starts. There has been little evidence of this so far except in Chicago, where the public—perhaps more conscious of the strike than the citizens in other parts of the country—have swamped some markets shortly after the strike was announced.

Big cities will be hardest hit by the strike because their markets are supplied by the large meat packing firms in which the C.I.O. union is strongest, the smaller packing plants around the country often being non-union. It is estimated that the strike will affect about 50% of the nation's meat supply.

The strike may result in some bargains to freezer and locker users because livestock producers are not looking too happily on the prospect of feeding animals they can't market at the present high prices of grains.

**'We'll Stay Out of
Range Selling--If,'
Says Detroit Edison**

DETROIT—"We shall stay out of electric range merchandising only so long as dealers show their willingness and ability to actively sell electric ranges."

That challenge, voiced by Fred Compton, representing the Detroit Edison Co., local utility, was issued to over 250 retailers at a dinner meeting of the Detroit chapter of the National Electrical Retailers Association recently.

Compton, who is sales manager at Detroit Edison, was one of two featured speakers at the first annual Get-Together of the local NERA group. The other speaker, Clif C. Simpson, NERA managing director, outlined the policies of the national organization.

In explaining the utility viewpoint in the appliance merchandising picture, Compton underscored the desire of Detroit Edison Co. to remain aloof from active selling of any appliances so long as dealers demonstrated their capability to move the goods alone.

"We shall be displaying certain major appliances such as electric ranges which, considering the competitive cooking situation, we believe must still be promoted," he explained, "but prior to the war, the dealers were doing such an excellent job that we do not believe it is now necessary for us to sell them through our offices."

"A plan is being worked out whereby prospects obtained through

**Steel Supply Will Suffer
If Coal Miners Stay
Out for a While**

DETROIT—Just when the steel supply picture was looking the brightest since the war, the walkout of the coal miners has come along to offer the possibility—if it continues for any length of time—of making the supply picture darker than ever.

Here's the situation in brief: The steel industry has indicated that it could operate for another week or two at present high schedules before being required to curtail work by a coal shortage should the strike last that long. In the last major coal strike steel, which lasted a little over two weeks, production was affected as much as 40% in some mills.

Manufacturers who use steel in the fabrication of their products will be affected in the ratio of their current steel supplies. The automobile and large appliance manufacturing firms usually have a 30 days' supply of steel on hand or on the way, but many smaller users might be hit much quicker. If the strike should drag on, power companies would feel the effect and all industry would suffer.

One thing that the coal strike will do for sure, industry observers feel, is to give renewed life to "gray market" operators in steel. Even steel from England is beginning to find its way into the "gray market," it is said, at a price of \$235 a ton.

**Safe-Way To Manage,
Market Iceberg Line**

CHICAGO—Safe-Way Food Locker Co. here is taking over the management of Iceberg Lockers, Inc., producer of a patented assembly of refrigerated lockers that will function outside of an insulated enclosure.

The Safe-Way Co., one of the major manufacturers of conventional frozen food lockers, will employ its facilities and personnel to market the line of Iceberg equipment. Fabrication of units with some recent improvements is now under way, the Safe-Way management announced.

A sales expansion program is being formulated and will include an attractive financing plan, it was stated. The Iceberg locker unit has application in retail food stores, hotels, hospitals, apartment houses, etc. in addition to locker plants.

**REMA-REWA Officers
To Meet April 1-3**

CHICAGO—Problems affecting both the Refrigeration Equipment Wholesalers Association and Refrigeration Equipment Manufacturers Association will be discussed at length when the officers and directors of each group hold a joint meeting April 1 to 3 at the Edgewater Beach.

The REWA board also plans a joint session at that time with officers of the Refrigeration Service Engineers Society to discuss plans for REWA's participation in future RSES educational programs and activities.

The joint REWA-REMA board meeting will probably be similar to the meeting the two groups had in Cincinnati last May, and at the Chicago session additional planning will be made for the joint meeting of the two organizations' full membership scheduled for French Lick Springs, Ind., Oct. 21 through 23.

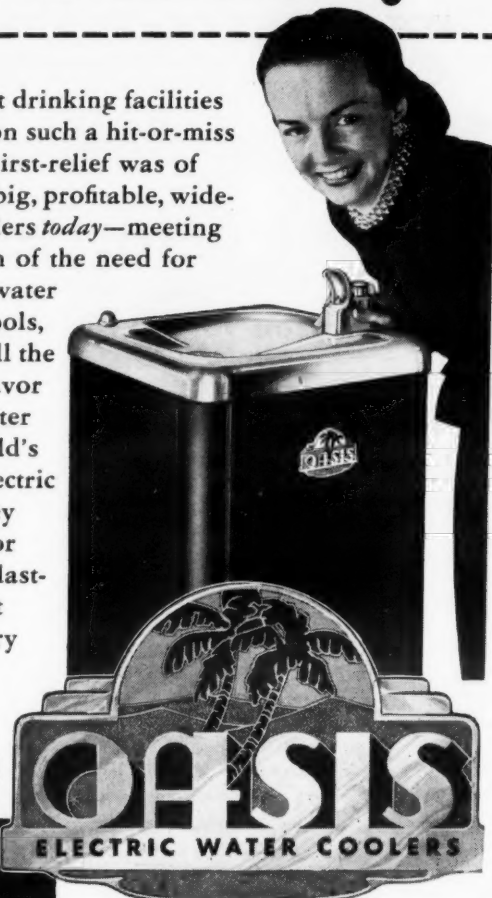
How many people drink WATER?

ALL OF US, of course—but drinking facilities are often so inadequate, or on such a hit-or-miss basis, that you'd think thirst-relief was of little importance. There's a big, profitable, wide-open market for water coolers today—meeting the fast-growing recognition of the need for cool, clean, clear drinking water in plants, stores, offices, schools, theaters, and so on. Put all the profit advantages in your favor by selling OASIS Electric Water Coolers. Made by EBCO, world's largest manufacturer of electric drinking water coolers, they give you the best features for pleasant, easy drinking, lasting efficiency, and low-cost operation. Models for every need. Write for details.

(MODEL OP-10 ILLUSTRATED)

Warranted for 5 Years!

THE EBCO MANUFACTURING CO.
401 W. Town St., Columbus 8, Ohio



January Nashville Appliance Sales In Drop from December

NASHVILLE, Tenn.—January sales of electric ranges, water heaters, refrigerators, and home freezers here, all slipped somewhat below December levels, the Nashville Electric Service has reported.

Though only 70 dealers reported as compared with 75 for December, the computation showed that refrigerator sales were down 11% in unit volume, water heaters down 19%, ranges down 24%, and home freezers down 62%.

Total units sold for month of January were: refrigerators—409, ranges—403, water heaters—254, and home freezers—11.

Cut Time for Keeping Record of Wages-Hours

WASHINGTON, D. C.—Reduction from four years to three years in the length of time which payroll records must be kept by employers is one of the changes in record-keeping requirements of the Fair Labor Standards Act (wage-hour law) sought by the acting administrator.

Arguments or other data regarding this proposed change may be submitted to the Administrator of the Wage and Hour Division, U. S. Dept. of Labor, Washington 25, D. C., before April 12, it was announced. Four copies must be sent in.

Two other changes have been proposed, but these are insignificant.

Gaston Director of Research, Development For Weber Showcase

LOS ANGELES—Donald Gaston, a veteran of 23 years in refrigeration engineering, has been appointed director of research and development of the Weber Showcase & Fixture Co. of Los Angeles, according to President Karl Weber.



Donald Gaston

Gaston, who played a major part in the development of General Electric's automatic ice-maker, is identified with several other patents assigned to G-E. One of these is the stainless steel evaporator. While with G-E, he was co-ordinator between the Schenectady, Fort Wayne, and Erie branches of the corporation's refrigeration setup during the period between 1930 and '34.

Later with Sunbeam Mfg. Corp. in the capacity as chief engineer of the cabinet division, he aided in the development of the Coldspot line.

During the war Gaston became assistant chief design engineer for the San Diego Division of Consolidated-Vultee Aircraft Corp. His work there was mainly connected with the production of B-24 Liberator bombers.

Since the war, Weber's new research chief has acted as a consultant for several organizations.

G-E Marks Production Of 100,000th Freezer

ERIE, Pa.—The 100,000th home freezer produced since the establishment of the freezer section of the household refrigerator division, Erie Works, General Electric, less than two years ago, rolled off the assembly line here recently.

The event was celebrated during a noon hour ceremony with more than 600 in attendance.

Speakers during the short program were Works Manager H. L. R. Emmet; L. H. Miller, manager of the household refrigerator division; J. L. Knight, manager of engineering, refrigerator division; C. A. Rystogi, superintendent of the home freezer section; G. S. Hill, division engineer of the freezer engineering division.

The freezer section was established in building 63 less than two years ago. Growth of the section has been rapid until now there are approximately 1,000 men and women on the payroll.

Trade-In 'Allowance' Back on Gas Ranges

NEW YORK CITY—Trade-in allowances on some gas ranges are being re-instituted by a few small dealers in the New York metropolitan area.

Some dealers said that business reverses during the past 90 days had placed them in financial straits. Consequently they had felt compelled to pare profit margins to move gas ranges.

One dealer in Queens indicated he would offer a \$50 trade-in allowance on his gas ranges.

Larger outlets and independent dealers, however, do not seem to be affected. Many of them claimed that the supply picture had considerably brightened in the past three months.

Adequate dealer inventories are still rare, a manufacturer's representative said. He pointed out that almost 80% of the nation's appliance producers are on allocation.

Federal Food Economizer Aimed at Small Store

WAUKESHA, Wis.—Aimed at the small store, a new 7-ft. long, double-duty, self-contained display case has been introduced by Federal Refrigerator Mfg. Co. here.

Designated as Model 4907, this so-called "Food Economizer" has a porcelain exterior, triple sweat-proof glass, large size rubber doors which will not warp or stick, according to the manufacturer, and is powered by a 1/8-hp. air-cooled condensing unit.

Besides being small enough for the small store, the case is also adapted for use as an auxiliary case in a super-market, it is claimed.

Philco Plans Greatest Advertising Drive

PHILADELPHIA — Philco Corp. has developed the most extensive advertising program in the company's history for 1948, reports John Ballantyne, president.

"The most extensive advertising program in the company's history has been developed for 1948 to promote the sale of Philco products, with every important advertising medium, including radio and television broadcasting, magazines, newspapers, direct-mail, and outdoor signs being used to call Philco merchandise to the attention of the public," Ballantyne said in a letter to stockholders.

Westinghouse Claims Increased Radiation For New 'Sterilamp'

BLOOMFIELD, N. J.—A new bactericidal lamp that is claimed to emit more than twice as much ultra-violet radiation as any lamp heretofore available has been developed by the Westinghouse Lamp Division here.

It is a 36-in. long, instant start, Slimline Germicidal Sterilamp that may be operated at three different levels of ultraviolet intensity. The output varies depending upon the current rating of the ballast used.

This germicidal Sterilamp will cut the over-all cost of ultraviolet protection almost in half, claims Charles W. Flood, Jr., manager of the Westinghouse Sterilamp department. It not only produces more ultraviolet for each watt of electricity consumed than previous lamps, but also provides an almost uniform level of radiation throughout life, he added.

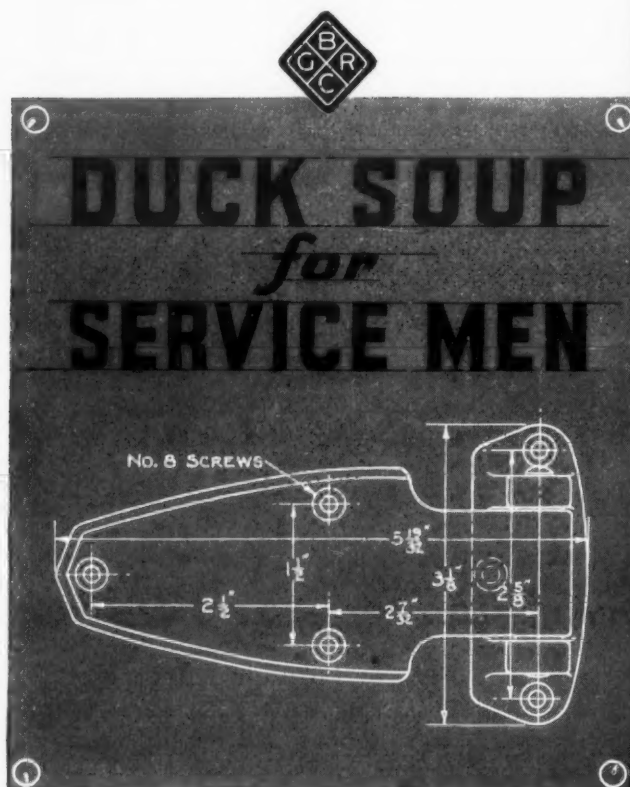
The new glass used for the lamp tube has a high resistance to solarization, an opaquing effect that reduced the amount of ultraviolet radiation former lamps were able to emit, it is stated.

"Thus," Flood explained, "we are able for the first time to provide an almost uniform protection of persons and products at a high level of ultraviolet output throughout life of the lamp."

Dealers Get Training By Television Program

PHILADELPHIA — Philco television station WPTZ here recently televised a program sponsored by Pierce-Phelps, Inc., local distributor of the Proctor iron.

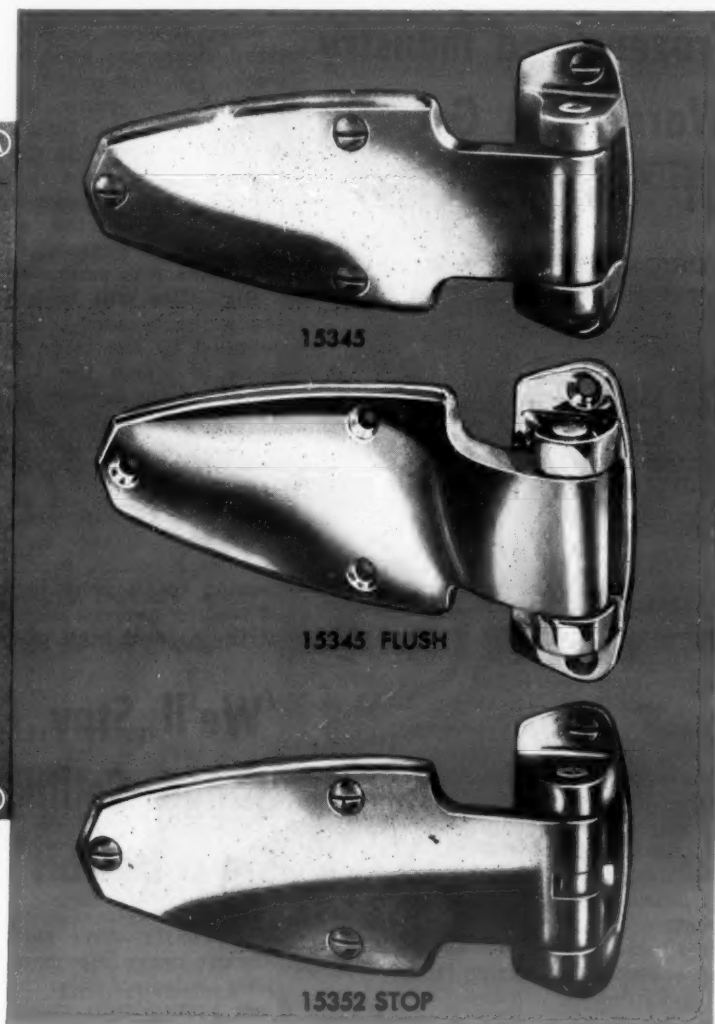
Hundreds of dealers in this territory tuned in at their stores to receive a sight-and-sound demonstration of the technique of presenting this appliance to the public.



It's the easiest kind of extra money . . . replacing old, worn-out refrigerator hardware with sparkling new Grand Rapids Brass locks and hinges! Every service call spells extra-profit opportunity—a chance to double or triple your day's income. Our new installation manual tells how—gives simple, complete replacement instructions for any kind of job. See your jobber about a copy—or write direct for your free manual today!



FREE
Ask Your
Jobber
If he can't
supply, write
us direct for
your copy.



No. 15345 REVERSIBLE HINGE. The most widely useful replacement hinge in our line . . . available NOW from your jobber in a full range of offsets.

No. 15345 FLUSH HINGE for those popular flush doors.

No. 15352 STOP HINGE. When you need it, you need it bad! You can get it now from your jobber—with 105° or 135° Stop, in a full range of offsets.

DESIGNED TO FIT THE JOB. Above you'll see three versions of just one of the many hinges available in the Grand Rapids Brass line. Our new installation manual pictures many other hinges and locks—gives full information how to choose and order hardware for any replacement job. With this information in your kit, you can go to town. Get ALL the facts TODAY!

by America's Quality Manufacturers
of Commercial Refrigeration Hardware

Grand Rapids Brass Company
Division of CRAMPTON MANUFACTURING COMPANY
Grand Rapids 4, Michigan

Wall WIRE
PRODUCTS COMPANY
PLYMOUTH • MICHIGAN
Makers of
REFRIGERATOR SHELVES • STAMPINGS
FORMED AND WELDED PRODUCTS

Pro-Seal finish may be applied to any article made of basic wire. It is an especially attractive finish for Refrigerator Shelves



The New Look in the "Automatic Cook"!

The Kelvinator "Automatic Cook" Electric Range has been a dramatic success. Now—we proudly present this new edition of the "range with a brain" in the sure knowledge it will add even greater prestige to Kelvinator's reputation in the American home.

No range was ever so brilliantly engineered with advance features—many of them Kelvinator *exclusives*.

IT'S NEW!—The amazingly easy-to-read Control Panel . . . set on an angle so that all controls are as easy to reach as they are to see. Signal lights flash on for each individual unit in use!

IT'S NEW!—The "Up-Down" Unit . . . it's a Scotch Kettle and extra, 4th surface unit . . . both in one!

IT'S NEW!—Improved "Electric-Fast" Surface Units have tilt-up feature for easier cleaning!

IT'S NEW!—Specially designed Pressure Cooker available to fit the deep well!

Feature after feature, this new "Automatic Cook" demonstrates Kelvinator product-engineering leadership in action. And like Kelvinator's Masterpiece Refrigerator, just recently announced, this magnificent range again emphasizes the *reality* of Kelvinator's fundamental policy: "When Kelvinator heralds a new line, the unusual may be rightly anticipated . . . revelations in styling . . . advanced utility . . . strong consumer appeal!"

Kelvinator — of Course!

...THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY

KELVINATOR, DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT, MICHIGAN

Export Firm Partner Sets F. H. Toler Will Manage Off on African Junket Norge Water Cooler Sales

NEW YORK CITY—Harry D. Friedman, partner in American Refrigeration Export Co., has left by plane on a six to eight week trip to the Union of South Africa to visit the firm's agents and distributors handling refrigeration equipment in Johannesburg, Durban, East London, Port Elizabeth, Capetown, Pretoria, Bloemfontein, and Kimberley.

Enroute Friedman will stop in the Azores, Dakar, Accra, and Leopoldville. The American Refrigeration Export Co. acts as the export department for a number of U. S. manufacturers.

Appliance Dept. Relighted

WATERTOWN, N. Y.—A new appliance department is a feature of the remodeled store of Household Merit Inc., 133-137 Court St. Appliances are located in a redecorated and relighted section of the main floor.

DETROIT—Frank H. Toler, formerly district representative with headquarters in Denver, has been appointed manager of water cooler sales, for the Norge division of Borg-Warner Corp., reports E. N. Guild, manager of refrigeration specialties sales.

Toler will concentrate on national sales and promotion of the company's new "Waterboy," portable water cooler. His headquarters will be in the Norge central office which is located in Detroit.

Toler has been with the company since November of 1946 at which time he was graduated from one of the training schools that are maintained by the company.



Frank H. Toler

Apex \$31,443,432 Worth of Sales Marks 63% Rise

CLEVELAND—Rising 63% over the previous year's figure, sales at Apex Electrical Mfg. Co. hit \$31,443,432 for 1947, the company report discloses. Net income for the period was \$1,803,444 (\$5.20 per common share) or more than four times the \$433,760 rung up in 1946.

Production schedules at Apex call for 720,000 vacuum cleaners, washers, and ironers to be turned out in 1948, stated C. G. Frantz, president. This amount compares with 532,884 sold last year.

N. Y. Dollar Volume Mounts 1%

NEW YORK CITY—Dollar value of department store sales here during the week ended March 13 rose 1% over the corresponding period of last year, according to the Federal Reserve Bureau. This same increase was also characteristic of the four-week sales period terminating March 13.

January Wholesale Volume Registers 9% Increase

WASHINGTON, D. C.—Although January's sales volume for wholesalers registered a 9% gain over the same month last year, the percentage of gain was considerably off compared to recent yearly increases, according to Commerce Department figures. Volume was off seasonally 8% from December.

January, 1947 sales in this category showed a 29% rise over the same month of 1946, while January, 1946 wholesalers' volume was up 18% over the corresponding month in 1945, the survey of 3,052 wholesalers revealed.

Fields showing the most marked gains in the 1948 period were listed by the department as meats, meat products, petroleum, electrical goods, and coal. Of the 38 trades included in the survey 25 showed gains over the 1947 period, two showed no change, and 11 registered declines.

Valued at cost, wholesalers' inventories were up 17% over January of 1947 and 2% over previous month.

In Charge of Sales



WILLIAM J. BROWNE
Vice President

Head Coolerator --

(Concluded from Page 1, Column 2)
to operate as a separate, corporate entity."

Other officers named include Frank S. Gibson, Jr., vice president and treasurer; Charles J. Gibson, Jr., secretary; Rex H. Sanford, assistant secretary and assistant treasurer.

In assuming his new duties as executive head of the Coolerator Co. in Duluth, Hamper will also retain his position as vice president of Gibson Refrigerator Co., it was stated. He has been associated with Gibson for the past 15 years.

Browne, who will head Coolerator's sales program as vice president in charge of sales, has been with the Gibson organization since 1931. He comes to Duluth from his former position as midwestern district sales manager of Gibson.

Sales-by-States by Dealers for NEMA Firms For the Year 1947

States	Unit Sales
Alabama	33,141
Arizona	13,518
Arkansas	22,736
California	217,556
Colorado	25,377
Connecticut	49,496
Delaware	6,493
District of Columbia	34,784
Florida	50,189
Georgia	51,214
Idaho	10,421
Illinois	192,067
Indiana	84,994
Iowa	53,598
Kansas	27,004
Kentucky	37,295
Louisiana	34,751
Maine	15,872
Maryland	42,058
Massachusetts	89,173
Michigan	141,392
Minnesota	58,525
Mississippi	20,701
Missouri	90,092
Montana	9,700
Nebraska	28,465
Nevada	5,507
New Hampshire	10,650
New Jersey	112,805
New Mexico	6,098
New York	303,352
North Carolina	48,735
North Dakota	9,947
Ohio	187,838
Oklahoma	32,916
Oregon	37,181
Pennsylvania	220,863
Rhode Island	24,059
South Carolina	22,873
South Dakota	10,221
Tennessee	53,310
Texas	133,856
Utah	15,931
Vermont	5,265
Virginia	49,565
Washington	51,390
West Virginia	35,744
Wisconsin	63,387
Wyoming	3,912
Total United States	2,880,017

Participating companies: Admiral Corp.; The Coolerator Co.; Crosley Div., AVCO Mfg. Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; Nash-Kelvinator Corp.; Norge Div., Borg-Warner Corp.; Seeger Refrigerator Co.

PROBLEM: Plenty of "FREON" No way of shipping it!


KINETIC CHEMICALS, INC.
WILMINGTON 98, DELAWARE
CABLE ADDRESS: KINETICHEM

Here are the facts about the "Freon" cylinder shortage:

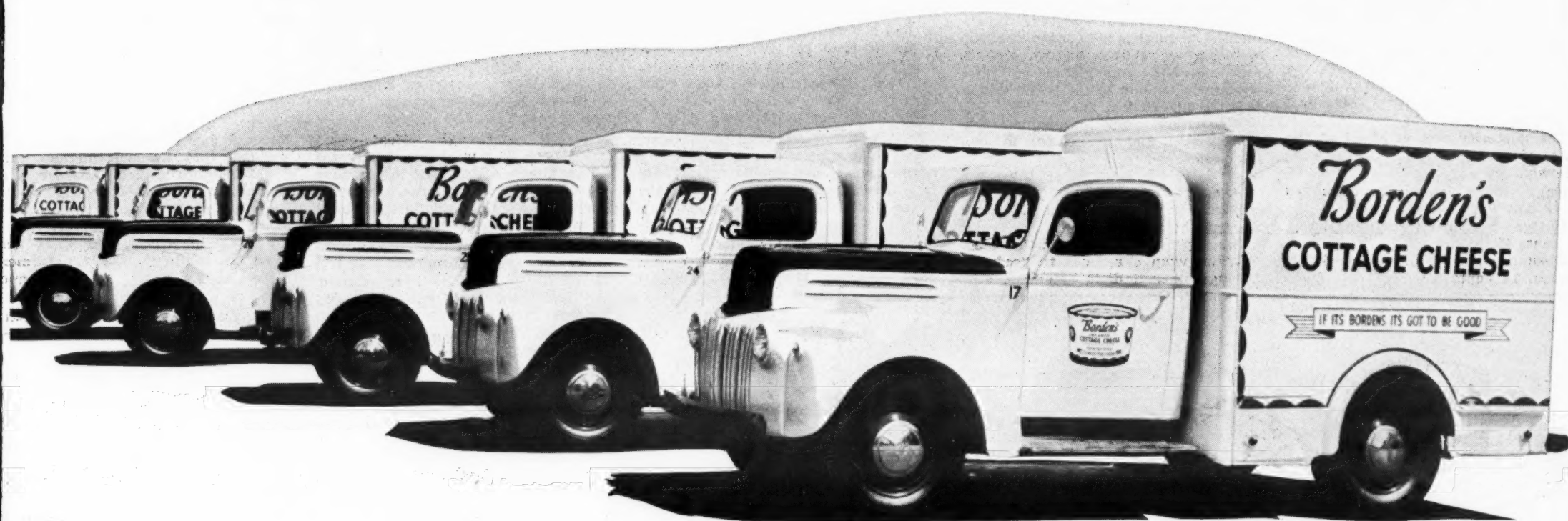
1. There are 233,500 cylinders up to 145-pound size away from the "Freon" plants.
 2. These cylinders have a capacity of 22,500,000 pounds of "Freon-12."
 3. Deposits paid and available for refund total \$3,000,000.
 4. Cylinder capacity of 7,000,000 pounds of "Freon-12" was lost in 1947 because shipments exceeded return of empties. In January 1948, "lost" cylinders had a capacity of 655,000 pounds.
 5. New cylinders received from all sources in January 1948 held only 188,000 pounds of "Freon-12." These were loaded and shipped in less than 3 days!
 6. Cylinders on order have a capacity of 8,130,000 pounds of "Freon-12," but deliveries cannot be expected for many months because of steel shortages.
 7. Of necessity, shipments have been reduced and will continue only in line with number of cylinders returned.
- ONLY SOLUTION** is the immediate return of empty "Freon" cylinders to: Kinetic Chemicals Inc., Carney's Point, N. J.
- Transfer "Freon-12" in stock or storage into refrigerating or air conditioning equipment now. Unless empties are returned, it will be impossible to meet spring and summer demands. Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington 98, Del.



MARSH
Pressure Gauges
Dial Thermometers
★The gauge with the
Recalibrator
Ask for this New
Refrigeration Booklet
JAS. P. MARSH CORP.
Dept. O, Skokie, Ill.

HERE'S YOUR MARKET

Borden's Chooses Servel Supermetics For Northern California Truck Fleet



Protect milk, butter and cheese products in transit

The Borden organization, prominent producer and distributor of dairy products, has selected Servel Supermetic condensing units for its fleet of delivery trucks in Northern California.

To be sure Servel Supermetic would meet their exacting requirements, Borden subjected the unit to exhausting tests. They developed a special mounting for a Supermetic in an experimental truck and checked the entire assembly in 50-mile-per-hour runs over San Francisco's roughest streets. Both the special mounting and the Supermetic unit proved satisfactory on all counts and were adopted for the entire fleet.

New Fleet will be Servel-Equipped

A large fleet of small trucks was equipped with one-third horsepower Servel Supermetics connected to hold-over plate coils. These Supermetic units efficiently and constantly hold temperatures below 45° F., thus providing adequate protection for milk, butter and cheese products while trucks are on their delivery routes. At night in company garages, the Supermetics pull the temperature down in a minimum of time, and accumulate "stored" refrigeration to take care of leakage and service the next day.

So successful was the performance of Servel Supermetics in the original fleet installation that Borden's has ordered additional units for a new fleet of larger trucks. These trucks will be equipped with one-half horsepower Model H2B Supermetics.

The complete success of Servel Supermetics in this and other mobile refrigeration installations spotlights another field in which there are tremendous opportunities for the wide-awake Servel dealer or distributor. Check your community for fleet operators whose need for dependable, trouble-free refrigeration presents a real occasion for quantity sales and a profitable increase in business.

Wide-range Servel line available

For more than ten years Servel has consistently developed smaller, lighter, higher speed compressors. Today eight compact fractional horsepower Supermetic models are available for a wide variety of truck refrigeration jobs. In the integral HP sizes, Supermetic is ideal for larger trucks using hold-over evaporators. Modern Servel belt-driven compressors offer equal advantages for long-haul applications where the compressor must be operated by means of power take-off or gas engine.



Servel's compact, lightweight Supermetic units and belt-driven compressors are ideal for every mobile refrigeration requirement. Specification and application data on request.

Servel Inc.,
ELECTRIC REFRIGERATION DIVISION, EVANSVILLE 20, INDIANA

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1) costs combined with lower efficiency, make England's total manufacturing costs higher than in this country, according to Mr. Raney—although he notes that labor costs are lower over there.

Most of the plants Mr. Raney visited are not as modern as those in America. The workers, however, do a good job where the necessary machinery and incentive are provided. Most English factory workers earn only \$18 to \$20 a week; and tool makers, who earn the highest pay, get only about \$36 a week. What's more: 45% of the pay remaining after fixed deductions is collected in taxes.

Because of his interest in his own farm, Rancliff, near Columbus, Ohio, Mr. Raney also visited British farms and farm leaders. He found that English farms lack modern machinery.

Mr. Raney was interviewed by several agricultural correspondents of British papers and farm magazines regarding the latest American practices.

The austerity diet in effect at the time of Mr. Raney's visit was as follows:

Eggs—1 per week per person, 46 cents doz.

Butter—2 oz. per week per person, 35 cents lb.

Oleomargarine—4 oz. per week per person, 14 cents lb.

Sugar— $\frac{1}{2}$ lb. per person per week, 7 cents lb.
Cheese—2 oz. per person per week, 24 cents lb.
Tea—2 oz. per person per week, 64 cents lb.
Meat—22 cents worth per person per week.
Milk— $\frac{1}{4}$ pt. per person per day, 16 cents qt.
Bread—3 loaves or equivalent in cake or flour per week.
Fruit and fish are not rationed.

Lifted from the Mailbag

Foley, Ala.

Editor:

I note your title "Waistlines Will Be Leaner in 1948 For People Who Don't Own Home Freezers."

Also the requests of Top Appliances, George D. James, Jr., J. H. Frolich, and so on down the line.

Being a mere woman, I am doubtless dumb, indeed, but in a country where women do 85% of the spending of the family income, and usually have full say about household appliances that are bought, and where these same women stand in lines and spend fortunes for "Success Treatments," reduction diets, exercises for reducing waist lines and on and on—Will you please be good enough to explain to me WHY this is a good advertising line?

We enjoy your magazine very much, and find it helpful in our business.

MRS. E. M. GEORGE

Answer:

Ever listen to a group of old ladies discuss their operations?

Same principle applies in this case.

When women set out to "reduce" through special diets, exercise, etc.,

it gives them something to live for, something to talk about, something to feel self-righteous about.

But if they couldn't get all they wanted to eat, that would be quite different. Women always want what they don't have, and especially they want what they can't have.

Tell a woman that coffee, sugar, meat, nylons, or soap chips are going to be scarce, and she'll trample her best friends underfoot to raid the chain stores.

"Reducing" is ego-salving. But not being able to buy all you want of something, whether or not you need it . . . Ah! That's different!

George Meek In Venezuela



favor by giving us the opportunity to do so.

"A customer is not an outsider to our business . . . he is a part of it."

"A customer is not a cold statistic . . . he is a flesh-and-blood human being with feelings and emotions like your own, and with biases and prejudices."

"A customer is not someone to argue or match wits with. Nobody ever won an argument with a customer."

"A customer is a person who brings us his wants. It is our job to handle them profitably to him and to ourselves."—*Ex-Cell-O-Tool Tips*.

Aesop, 1948

"We thought we had heard about all of them, and then along came the Federal loan program for the silver fox farmers. This would involve \$8 million."

"We asked our secretary (who tells us she is more interested in mink) to check up for us, and the story is this: By 1944 simply everybody got to wearing silver fox, and so that made this fur pretty unfashionable. The raw skins had been selling for about \$50 each. Now are selling for half that much. The New Look has not helped, either, because it calls for short-hair furs. This means—the silver fox raisers say—that fur farmers lose money on every silver fox pelt they produce, and so what could be more natural than for them to turn to the Federal government? They have done that. They have asked Congress to authorize the Farm Credit Administration to lend them \$8 million. The fox farmers believe this will give them a chance to work out their problems."

"If Congress believes these loans too risky, we would like to suggest several other possible plans:

"1. The Federal government might buy up all the silver fox production, and store the pelts underground at Fort Knox.

"2. Or, if Fort Knox is found already overcrowded, every third silver fox pelt might be plowed under.

"3. Or the Federal government might pay the fur farmers not to raise silver foxes.

"We had an uncle who owned a livery stable, and when the automobile got to be popular he just had to switch over, although he never did stop liking horses better than automobiles. Of course, that was back before the economic enlightenment."—*Tax Outlook*.

Recent breaks in the prices of foodstuffs, however, can't be dismissed so airily. Many prospects for home freezers who might have succumbed to the "hoarding" instinct now aren't so sure that freezing a supply of foodstuffs is a hedge against future price rises.

It will be, though. Meat—especially beef—is sure to be costly for a long time. Exorbitant prices have led cattlemen to liquidate their flocks. It will take years to build them back to normalcy.

Once again the weather has favored grain growers in America. And it has thrice-blessed planters abroad. But this good luck can't hold out forever. Drouths are overdue.

Because the beef supply will be inadequate for a long time, the purchase of a home freezer now is a good investment. And because the weather-cycle is overdue for a prolonged, protracted bad turn, in coming years the owners of freezers who buy and store foodstuffs this year will be ahead of the game.

What Is a Customer?

"A customer is the most important person ever in this office. . . in person or by mail.

"A customer is not dependent on us . . . we are dependent on him.

"A customer is not an interruption of our work . . . he is the purpose of it. We are not doing him a favor by serving him . . . he is doing us a



ONLY ONE
TUBING IS 'SUPERIOR'

From the booming oil fields to the bustling industrial centers, Texas is a 'Superior' state. Manufacturers who are looking for countless advantages in copper tubing really go for 'Superior'.

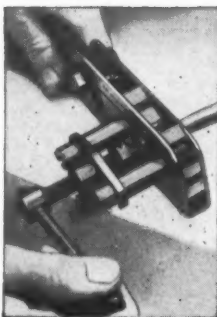
Penn's finer tubing guarantees trouble-free installations for it has four outstanding features:

1. Seamless—No variation in wall thickness—perfect uniformity.
2. Dry—'Superior' registers 0 on the Penn moisture-meter because of Penn's special dehydration process.
3. Clean and Bright—Spotlessly washed and polished—not a speck of dirt.
4. Easy Bending—Extremely ductile for it is annealed to specifications.



'Superior' tubing is available in straight lengths or coils, 1" O.D. to capillary .093" O.D. Send for tubing and tool literature today. Give us the word—call, write or wire your requirements.

PENN TUBING IS "SUPERIOR"



FLARING TOOL



CUTTING TOOL

The Papco #400 Flaring Tool proved such an advancement in its field, there was a demand for a cutting tool of the same superior quality. The result is the revolutionary Papco #500 Cutting Tool. Modernize—order Papco today. Write for literature on tube tool kit.

PENN BRASS & COPPER COMPANY
ERIE, PENNSYLVANIA

Phone 35-111

"One Shot and
Sure Shot"
... SAYS MR. SPEAR

THAWZONE
PATENTED
The PIONEER FLUID DEHYDRANT

934 N. JACKSON STREET
DANVILLE, ILLINOIS

PHONE 4848

HARRY H. SPEAR
REFRIGERATION SERVICE ENGINEER

November 28, 1946

Highside Chemicals Company
195 Verona Avenue
Newark 4, New Jersey

Attention: Mr. L. V. Gardner

Dear Mr. Gardner:

I started using Thawzone exclusively six years ago and since then have never used a dryer (except on SO₂) in any service or installation work. I always install a new strainer, put in Thawzone, and then go away and forget it. Thawzone is a one-shot and sure-shot position with us. When you service and install 75 miles from the shop, you must have something that is positive in action.

Some time ago I installed an F12 locker plant (20 H.P.) and used some old 1-1/4" iron pipe coils. These were cleaned and washed in carbon tet, and then, to be on the safe side, I put two quarts of Thawzone into the 500# of Freon. This job has given us no trouble at all from freeze-ups. We also added 1-1/2 quarts of TRACE at the same time.

Every new job has Thawzone applied directly into the receiver and strainer, as I have yet to see any such equipment in which every piece is absolutely dry. On service jobs we inject Thawzone into both the strainer and crankcase. I have never had any adverse conditions arise in any system from the use of Thawzone. We cannot praise Thawzone enough and you may call on us for a reference any time.

Sincerely,
Harry H. Spear

HHS:A

HIGHSIDE CHEMICALS CO.
195 VERONA AVE.
NEWARK 4, N. J.

Advantages of Automatic Washer, Launderette Are Shown In Survey of Costs

NEW YORK CITY—To wash or to let others wash for you.

That is a question upon which the *New York Times* attempted to shed some light in a recent issue.

In comparing costs and advantages of doing the family laundry at home in an automatic washer or a non-automatic washer with those of sending it to a commercial laundry or taking it to a launderette, the *Times* presented the following data:

Washing in an automatic washer: Officials of Bendix Home Appliances, Inc. were consulted on this. They estimated that the average Bendix user does six loads of wash a week totalling approximately 54 lbs. Cost of soap, electricity, and heating the water were placed at \$18 to \$23 per year if the water heating was done by gas and \$25 to \$30 per year if water heating was done by electricity. To this must be added the cost of 162 gals. of water per week and, in hard water areas, the cost of a water softener. Also, the initial cost of the machine was higher than for a conventional type washer.

Washing in a conventional washer: A survey conducted among 360 farm and city families by Ann Aiken of the New York State College of Home Economics at Cornell university revealed that the average conventional machine user spent about \$30 per year for soap, water, and repair bills.

These families did an average of 37 lbs. of wash per week and used, generally, only one wash water and one rinse water for the week's washing.

Sending the wash to a commercial laundry: Harry Frankel, executive secretary of the Family Laundry Owners Association, estimated that the average New York family that sent its laundry to a commercial establishment spent between \$80 to \$100 per year.

He noted, though, that a large family could send a wet wash bundle every other week for as low as \$50 per year. He pointed out that costs of operating a commercial laundry that picks up and delivers have increased a maximum of 35% since the war.

Taking the wash to a launderette: Arthur W. Percival, president of Telecoin Corp., estimated that the average housewife who takes her wash to a self service laundry in New York rents about two machines per week.

At 25 cents per load plus 5 cents for soap bluing or bleaching, the minimum cost would be \$26 per year.

Conduit Assemblies for Equipment Producers Will Be Made by G-E

BRIDGEPORT, Conn. — General Electric Co. has inaugurated a new service to supply electrical conduit assemblies made up to the specifications of individual equipment manufacturers.

According to D. J. Murray, manager of the G-E conduit products division, the service is designed to simplify the manufacturing problems of any company which determines, either during the engineering or production stage, that its product has electrical circuits requiring the protection of conduit.

Murray said that the service aims particularly to help manufacturers of such products as oil burners, water heaters, major appliances, textile machinery, machine tools, trailers, and pumps.

"By ordering a complete wiring assembly to fit his specific production problems, the manufacturer can not only eliminate or simplify the costly

operations involved in cutting, threading, and bending conduit, stripping and tinning wires and selecting and adding wiring devices, but also speed production, occupy less floor space, and improve the quality of his product," he said.

General Electric conduit assemblies are supplied with or without wire, in flexible or rigid conduit or EMT, and with practically any wiring device needed.

They are sold through the company's franchised electrical wholesalers.

Better Durables Supply Helps Boost Sears February Volume

CHICAGO—Catapulted by higher prices, an increase in the number of stores, and an improved supply of refrigerators and washers, Sears-Roebuck sales for February reached a level 22.1% above the 1947 month.

The \$139,994,096 sales total achieved last month was a new record for the company and a continuation of the climb begun in January when sales were 17% over the similar period a year ago.

Washer Mfr. Sales Jump 38.2% During January Frigidaire Major Dealer Div. Joined by Gannon

CHICAGO—A jump of 38.2% in manufacturers' sales of standard size household washers was reported for January by the American Washer & Ironer Manufacturers Association. A total of 358,445 units were sold in the first month of the year as contrasted with the 259,233 washers of this type moved in January, 1947.

Approximately 351,152 washers were sold during December, 1947.

With small washers the sales picture was not so bright. Only 35,862 were moved in January, 1948 as compared with 50,000 in the same month last year and 38,058 in December.

The ironer sales report indicated that 40,192 units were cleared in January, 1948; 31,509 in January, 1947; and 70,599 during December.

Dealer Named Promotion Chief

BUFFALO—Charles A. Meyers has been appointed general sales and promotion director of Frank Meyers, electrical appliance dealer here.

DAYTON—E. J. (Jack) Gannon, former president and general merchandising manager of the J. B. White Co. department store, Augusta, Ga., has joined the Major Dealer division of Frigidaire's Appliance department.



E. J. Gannon

Gannon will specialize in department store sales activities and will make his headquarters in Dayton where the Major Dealer division is headed by C. H. Glenny.

He started his career as a buyer and appliance merchandiser for the Davidson Furniture Co. of Kansas City, later becoming associated with the Kansas City branch of the Frigidaire Sales Corp., and then joined the Jones Department store in Kansas City. In 1943 he accepted the presidency of the J. B. White store.

Why more Frigidaires serve in more American Homes than any other refrigerator

NO GUESSING GAMES!



HOW FRIGIDAIRE'S NATIONAL MAGAZINE AND RADIO ADVERTISING SPOTLIGHTS THE DEALER

In every national Frigidaire advertisement, people are told "where to buy" with a prominent statement like this:

SEE YOUR FRIGIDAIRE DEALER. Find name in Classified Phone Directory.

And every Frigidaire national radio program helps build "dealer identification" with these closing words:

"The Man Called X" is presented each week with the best wishes of YOUR FRIGIDAIRE DEALER, who invites you to come in . . .

It's strong advertising, and it's strong "dealer identification" that directs prospects to Frigidaire Dealers' showrooms everywhere.

And to help the dealer "sign his name" to this powerful national ad-

vertising there are distinctive neon signs, classified telephone listings and showroom displays that say in effect, "Here's your dependable Frigidaire Dealer in this community—the place to buy Frigidaire products."

Yes, when it comes to identifying the Frigidaire Dealer with the Frigidaire factory and with Frigidaire products, you can—*Depend on Frigidaire to do things right.*

You're twice as sure with two great names

FRIGIDAIRE
MADE ONLY BY
General Motors

DON'T REBUILD Armatures

Save BY BUYING NEW
WAGNER
Armatures



They have new core iron and windings, new commutators properly undercut, new shafts, new centrifugal short circuiting devices, new rocker arm and brush holder assemblies with brushes. They are dynamically balanced, fully tested, ready to install. Get them now from your Wagner distributor. Name on request.

Wagner Electric Corporation
6471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS



ACME Continuously Serving the REFRIGERATION INDUSTRY Since 1919

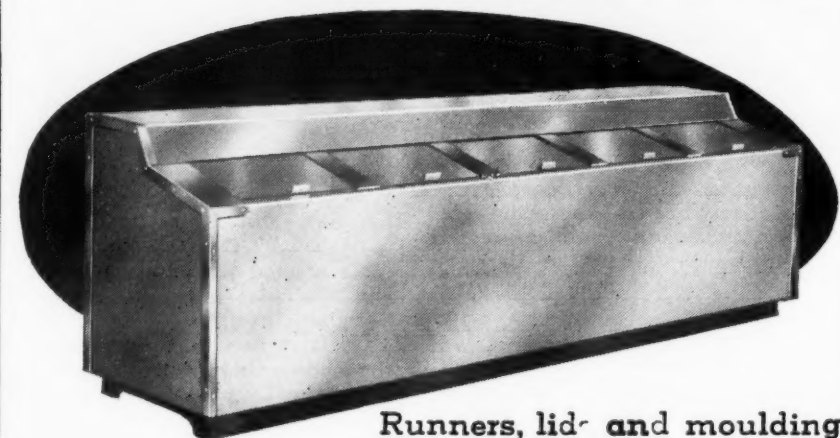
- EVAPORATIVE CONDENSERS
- DRY-EX WATER CHILLERS
- FREON AND AMMONIA CONDENSERS
- SHELL AND COIL CONDENSERS
- PIPE COILS
- INDUSTRIAL UNIT COOLERS
- HEAT EXCHANGERS
- OIL SEPARATORS
- LIQUID RECEIVERS

REPRESENTATIVES IN PRINCIPAL CITIES

ACME
INDUSTRIES INC.
JACKSON, MICHIGAN

ROGERS Dry Beverage Cooler

With disappearing lids
Allowing every section to be used simultaneously.



Runners, lid and moulding of stainless steel
39" high; 30" wide; 4, 6, 8, or 10' long.

Write for catalogue showing this quality line of refrigeration.

DEALERS
WANTED

Write, wire or phone today for information on franchise.

Immediate Delivery!
W. ALLEN ROGERS Industries
BOX 272-AC DEMOPOLIS, ALA.

Converters Aid Dealer To Promote Appliance Sales In 'DC' Area

WASHINGTON, D. C.—The A B C Supply Co., 1414 Fourteenth St., N.W., here is using converters to build up their electrical equipment business.

In many parts of the Washington area, only direct current is available, and many of the local dealers have been handicapped in that their current is designed to operate off of alternating current. A B C, however, have been able to acquire a supply of converters so that they are able to install television sets, washing machines, and refrigerators which will work efficiently in the previously closed areas.

In a recently inaugurated sales campaign, the company has worked up an effective sales letter and made a complete coverage mailing to residents in the affected areas, an announcement said.

In it they not only offer the conversion service, but agree to demonstrate the various appliances in the prospect's home. They are currently featuring a free five-day demonstration of their television sets in the home, and have received numerous requests from potential customers for this service.

Accompanying the same letter is a printed advertisement which illustrates some of the "name" products they sell, and a stamped postal which the applicant can return with information checked, and which the company is using to develop a prospect list.

Budgets Show \$2275-\$8356 In Electrical Appliances Can Be Sold to Most Families

NEW YORK CITY—An item-by-item break-down of the electrical appliance needs of the "small budget" and "large budget" families was recently issued here by Nelda Publications, Inc.

J. Louis Albert, editor of "The Standard Merchandise Manual," a Blue Book of the appliance industry, worked out the two budgets which he has entitled "The Complete Post-War Electrical Life." All appliances, Albert stresses, are standard-make so as to give the prospective purchaser a reasonably accurate idea of the costs involved.

Both budgets take into account the long-term as well as the immediate electrical-living needs of the two income groups. For the "small budget" this totals \$2,274.56. For the "large budget" the total comes to \$8,356.23.

While covering the obvious kitchen and laundry needs of the two types of

families, the budgets also make provision for many luxury items, in either case indicating where the lower income family can economize in its selection of appliances.

For instance, where the family with more ample funds (Family A) would need a 9-cu. ft. refrigerator (\$434.95), the smaller budget group (Family B) would choose a 6-cu. ft. model (\$186.75). Where Family A might purchase a 16-cu. ft. home freezer (\$500.00) Family B would be more apt to obtain a 3.2-cu. ft. unit (\$156.45).

In this manner Albert's budget considers a host of other appliances, such as the range, water heater, washer, clothes dryer, dishwasher, garbage disposal unit, ice cream freezer, electrical blanket, and television set.

Text of the separate budgets outlined for the two groups is as follows:

THE COMPLETE POST-WAR ELECTRICAL LIFE BUDGET			
Small House Budget		Big House Budget	
WAKING UP ELECTRICALLY			
4.95	Alarm Clock	Clock-Radio	41.95
GROOMING ELECTRICALLY			
99.75	(Round type) 30-Gal. Water Heater	(Table top)	124.75
109.95	Washing Machine	Automatic type	349.75
219.50	Automatic Clothes Dryer		229.75
17.80	Combination Steam and Dry Iron	Flatplate Cabinet Ironer	18.95
			229.75
135.75	Portable Sewing Machine	Desk-Style Sun Lamp	233.00
9.95	Sun Lamp Bulb		98.50
22.95	Massager		22.95
14.95	Hair Dryer		14.95
15.00	Shaver	Lady's Shaver	23.50
			15.00
KEEPING HOUSE ELECTRICALLY			
209.75	Automatic Dishwasher Unit		
118.75	Garbage Disposal Unit		
39.50	Electric Broom	Automatic Sink with Dishwasher and Disposal Units	453.50
24.95	Hand Vacuum	Upright Vacuum	89.75
		Tank Vacuum	79.95
		Floor Polisher	119.00
STORING FOOD ELECTRICALLY			
186.75	6 cu. ft. Refrigerator	9 cu. ft. Refrigerator	434.95
156.45	3.2 cu. ft. Freezer	16 cu. ft. Freezer	500.00
PREPARING AND SERVING MEALS ELECTRICALLY			
Range			
169.95	Table Top	Automatic	395.95
7.95	Timer		
6.95	Coffee Maker	Automatic Coffee Maker	28.75
3.95	Toaster	Automatic Toaster	22.00
5.95			6.95
9.95	Waffle Baker	Automatic Waffle Baker	22.95
15.95			17.95
19.25		Broiler	18.95
10.95			19.95
13.95	Portable Mixer	Juicer	10.95
7.95		Mixer with Attachments	84.50
24.95	Ice Cream Freezer	Whipper	9.00
5.00			
9.95		Beanery	5.00
		Pressure Sauce Pan (Accessory Equipment)	16.95
ELECTRIFYING THE BABY			
5.00		Electric Foot Warmer (Baby's Blanket)	7.95
5.95		Bottle Warmer	5.00
26.95		Bottle Sterilizer	6.95
		Portable Washer	36.95
KEEPING WARM ELECTRICALLY			
37.35	Plug-in Steam Radiator		37.35
6.95	Portable Heater		15.73
39.86	Blanket		49.85
		Comforter	49.85
KEEPING TIME ELECTRICALLY			
		Grandfather's Clock	535.00
ELECTRICAL FIRST AID			
1.10	Infra-red Heat Lamp		7.95
4.75	Heating Pad		9.95
3.50	Vaporizer	Automatic Vaporizer	8.95
RELAXING ELECTRICALLY			
325.00	Table Television Set with 52 sq. in. screen	Television console model with 222 sq. in. direct view screen	2,495.00
	Table Radio-Phonograph	Electrical Piano, including harpsichord, radio-phonograph combination with automatic record changer	1,250.00
69.75	Combination with automatic record changer		39.50
34.95		Liquidizer	9.95
9.95		Corn Popper	9.95
3.95	Chimes	Westminster Chimes	49.50
COMPLETE POST-WAR ELECTRICAL LIFE BUDGET			
TOTALS		TOTALS	
\$2,274.56			\$8,356.23



How you, Mr. Dealer, can

Turn COLD WATER into COLD CASH

Selling and Servicing Famous PURO WATER COOLERS

Nationwide demand for PURO'S modern line of coolers is growing so fast that our own direct sales organization no longer can handle it alone.

Here's a rare opportunity.

Now for the first time in 50 years, PURO, America's Drinking Water Specialist, invites applications from dealers who want to profit through PURO sales and service opportunities.

WHY PURO IS A QUALITY WATER COOLER

PURO Water Coolers excel in design, in appearance, in more rugged construction, in more and better insulation . . . in greater cooling capacity. Because we've always done a rental-service business, we BUILD a

better cooler for long years of trouble-free operation.

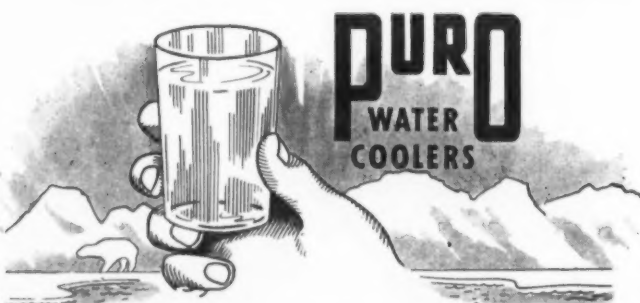
SELL OR RENT

If you qualify, you can make attractive profits on outright sale of units. Or, if you want profits to continue for years, you can install and service on a contract basis on the tested PURO PLAN.

Shortages are over. We can supply all models in volume — promptly.

Where dealer business warrants, we will back you with advertising and sales aids . . . supply you with tested selling technique.

Here's a big opportunity to turn cold water into cold cash. Act now. Write us today, describing your business and giving references.



PURO FILTER CORPORATION OF AMERICA
436-440 Lafayette Street, New York 3, N. Y.
Cable address — "Centadrink, New York"



IT'S
GEM
FOR "48"

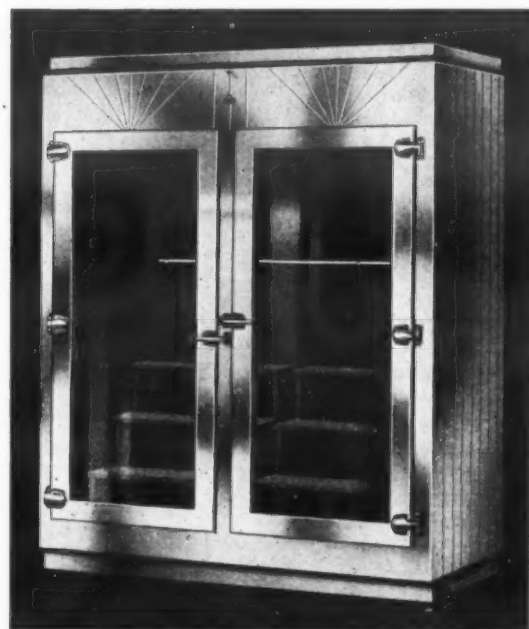
NOW
AVAILABLE
IMMEDIATE
DELIVERY

With
Hinged and Sliding
Doors

Stainless Steel
Fluorescent Lighting
Adjustable Display
Sectional or One
Piece Construction

DEALER
Inquiries Invited

FLORIST REFRIGERATORS



GEM REFRIGERATOR CO.

2539 Germantown Ave.
PHILADELPHIA 33, PENNA.

Air Conditioned Dough Mixing Room Insures Correct Texture and Flavor In Bakery Pies

Tile-Finished Enclosure Holds Even Conditions

ST. LOUIS—Absolute control of pie-dough texture and flavor has been made possible with a novel air conditioning installation in the new commercial pie bakery of Walter Freund Baking Co. here.

The 97 year old firm has spent over half a million dollars for what it claims to be the most sanitary, automatic-machinery equipped pie bakery in the country, which will specialize in high quality 9 in. pies for the restaurant and hotel market, plus small tart sizes, packaged in setup boxes and cellophane-wrapped, for the lunch counter trade.

Work on the plant has been carried on for more than two years, under direct supervision of Monroe Boston Strouse, nationally-known pie authority. It features such innovations as stainless steel or tin-plated machinery throughout, vitiate white tile walls from floor to ceiling, aircraft aluminum rolling racks, automatic forming, mixing, baking, and packaging equipment. With 50,000 sq. ft. of space, the plant covers three floors, with distribution department on the ground level, a low temperature unit cooler which will hold two carloads of frozen fruit in the basement, and the production plant itself on the third floor.

One of the toughest problems in guaranteeing perfect pie dough production along with fine fillings and pie specialties has been St. Louis' extremes of hot and cold temperatures, according to Harold Freund of the management. With winter temperatures dipping below the zero mark, and the summer heat well above 100 for more than 50 consecutive days in 1947, it was felt necessary to insure an even, controlled temperature in the most "critical" production stage—original mixing of the dough and its shaping in automatic pie forming machines before the baking process.

"Pie dough is peculiarly sensitive to temperature," Freund said, "which can result in an overly soft texture or too crumbly a crust depending upon how temperature affects the original ingredients. The best fruit fillings will not satisfy discriminating customers if the pie crust doesn't measure up to it."

Therefore, all of the actual dough mixing and production equipment in the Freund plant is enclosed in a white tile housing extending one half of the third floor production area. Approximately 90 ft. long by 35 ft. wide, the production room is constructed of concrete and tile, with the "kitchen" for fruit fillings at the right end, and the automatic baking oven at the other. These, after being cooked in high pressure stainless steel kettles, are transferred to a walk-in cooler at the right side of the air conditioned enclosure, to be held for use.

All dough, however, is mixed by automatic mixers inside the enclosure, with automatic water measuring, flour measuring, and other ingredients controlled.

Dough, after being mixed and checked, is fed into a hopper to supply an entirely automatic pie makeup machine which produces 2,000 9-in. pies or 6,000 tart size per hour, forming unbaked crusts which roll by electric conveyor and gravity track to the huge all-white automatic oven outside of the enclosure.

Natkin & Co., St. Louis air conditioning contractor, designed the installation, which utilizes a water saver unit outside of the enclosure, two condensing units and a number of fan and coil stations to keep the temperature even throughout the production room with no "heat pools"

'Room-Within-a-Room' Design Possible With Air Conditioning



White tile room in St. Louis bakery which is completely air conditioned. Equipment connected through the wall is water saver.



Pie dough being mixed inside the enclosure under precision-controlled temperatures.

even when outside temperatures reach 105° F.

Thermostats are installed near all points at which newly mixed dough is handled, each cooling station cutting in as needed to keep a level tem-

perature peak, with special attention to heat-producing locations.

"What the temperature should be is being determined by tests," Freund explained. "We will need a summer's operation behind us to determine

what level will be maintained." Such factors as two or more shifts, a number of additional personnel in peak periods, etc., must be included before the exact air conditioning process is determined.

NOW! Get Set to Cash In on the Terrific Untapped Room Air Conditioning Market

SELL THE AMAZINGLY SUCCESSFUL*



A Major Appliance that's Easy to Sell, Trouble-Free and PACKED WITH PROFIT



Acclaimed by famous Testing Laboratories, Utilities and leading experts in the Air Conditioning Field

Thousands of units in satisfying daily use

Unlimited Market for New Profits



Offices



Homes



Every Office and Home in Your Area a Prospect

The market is pre-sold for you! Air Conditioning is accepted and demanded by the public. NOW—the MITCHELL Conditioner brings perfected, practical Air Conditioning into the home and office—to meet the vast, untapped demand for personal comfort and health. Every business house, every office building, every home of middle-class means or above—that's your market! It's unscratched—yours for the taking—and the time is NOW!

NATIONALLY ADVERTISED

Millions of prospects will read about the advantages of the MITCHELL Room Air Conditioner in Time, Fortune, Business Week, House Beautiful, House & Garden and other leading national publications . . . powerful advertising that sells for you.

DISTRIBUTORS:

A few desirable territories are still open. Inquiries are invited. Write for details today.

AIR CONDITIONING DIVISION

MITCHELL MANUFACTURING COMPANY

2525 N. Clybourn Ave., Chicago 14, Ill.



Genuine Room Air Conditioner

Real 5-Function Air Conditioning Perfected...Accepted...Acclaimed An Easy-to-Sell Appliance Package

Here are the powerful selling advantages that will make big money for you in this vast, receptive, wide-open field:

The MITCHELL Room Air Conditioner performs all 5 essential functions of genuine Air Conditioning . . . cools, de-humidifies, filters, circulates, ventilates. Powerful 1/2-ton hermetically-sealed refrigeration mechanism delivers 5780 BTU per hour (certified by U. S. Testing Co.)—nothing in the field comes close to this performance!

It's easy to get into the profitable Room Air Conditioning business with the MITCHELL unit. Sell it like any major appliance package. We provide simple instructions for easy calculation of installations. There's nothing to installation (unit mounts easily in window; no plumbing required; plugs in like any ordinary appliance). The barest minimum of technical knowledge is all you need to sell the MITCHELL unit successfully.

Start selling the MITCHELL Room Air Conditioner NOW. Don't wait for the "heat waves." Get in on the ground floor today. Find out how easy it is to get your share of this profitable business. Write for the full selling details. Order your floor samples early and get set for big volume sales and profits.

DEALERS! GET SET FOR BIG SUMMER SALES. Write for brochure, "How to Make Money Selling MITCHELL Room Air Conditioners." Get into this profitable field now. Send for details today.

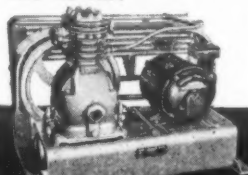
AIR CONDITIONING DIVISION
MITCHELL MANUFACTURING COMPANY
2525 N. Clybourn Ave., Chicago 14, Ill.

Rush us full information on opportunity to profit quickly and easily with the MITCHELL Room Air Conditioner.

Name.....
Firm.....
Address.....
City..... State.....



PIONEERS in the refrigeration field since 1917! LIPMAN Machines give dependable service, low cost operation. Designed for use with Methyl Chloride, Ammonia, Freon 12. Units are available in sizes from 1/4 thru 40 H.P.



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YATES AMERICAN MACHINE CO., Elgin, Wisconsin

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COMMERCIAL DOMESTIC

RECORD

EVAPORATORS
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WATER DEFROST
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Evaporators

Leading the field in the development of refrigeration, evaporators for use on high and low temperature applications, "RECORD" products have a dependable record of performance. "If it's a 'Record'—it's right."

REFRIGERATION ENGINEERING, INC.
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Los Angeles 22, Calif.

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on genuine

MARLO
Products

MARLO-HEAT TRANSFER
Since 1925

Omaha Hot Spot Will Cool Off As Locker Plant

OMAHA, Neb. — The Florentine night club at 72nd and Dodge Sts. which has had a hectic career including "ins and outs" with the law, is now scheduled to "go strictly respectable" and utilitarian, with its purchase for \$40,000 by Martin Hansen, manager of an Omaha frozen food locker plant which is one of the largest in the nation. The new owner is going to alter the character of the night spot by converting it into a frozen food palace.

Hansen will spend another \$75,000 to install refrigeration equipment and alter the club into a frozen food locker plant. Alterations are scheduled to be completed by next September.

A room for chilling and aging will be installed on the first floor, and in front of the room will be a huge display cooler. Meat will be displayed behind glass, and there will be a large room for retail selling. The meat processing room will be in the rear of the plant.

Approximately 1,500 frozen food rental lockers are to be installed in the basement. Also housed in the basement will be the sharp-freezer facilities, heating plant, and utility room.

Hansen already has taken possession of the former night club and alterations were started early in March. This will be the sixth major locker plant in Omaha and the 426th in Nebraska.

Refrigeration Will Save \$5,000 a Year for Fox Ranch

By C. Dale Mericle

BRIDGEPORT, Mich. — Several hundred foxes will soon lick their chops over fresh frozen horse meat and fish, while the management happily chalks up savings of nearly \$5,000 a year as the direct result of a refrigeration installation here.

The installation is a 0° F. cold room and freezer which Frank Losee of Losee Refrigeration Sales & Service in nearby Saginaw is putting up on the Bridgeport ranch of Michigan International Fox & Furs, Inc.

The savings, explains Josie M. Greenberg, manager of the ranch, will pay for the installation in slightly over a year. And they come from two sources:

Actual cold storage charges paid to a Saginaw cold storage firm, and Savings in gas and oil and truck wear-and-tear as well as the driver's time required to travel the seven miles into Saginaw at frequent intervals to bring back the frozen food for the foxes.

According to Mrs. Greenberg's books, the ranch has spent \$33,700 in the past seven years for cold storage charges alone, and she further figures that the time and expenses involved in the trucking operation itself amount to some \$600 a year.

Cost of the installation is expected to run somewhat less than what would normally be required at present-day construction costs. The cold room is being erected in a building which was put up in 1940 with the plan of eventually making such an addition. The room itself measures 24 by 14 by 12 ft. high, and the installation involves putting in insulation, a unit cooler, and a condensing



These two prize male foxes held by Emerson Blumberg (left) and Joe Perry are among the hundreds who'll benefit from fresh frozen horse meat supplied by the new freezer-cooler at the Bridgeport, Mich. fox ranch.



Frank Losee of Losee Refrigeration Sales & Service, Saginaw, Mich., checks measurements on insulation as he supervises the installation of the cooler room at the fox farm.

unit. Employees of the ranch are assisting in the work.

Johns-Manville rock cork, 6 in. thick, is laid over the concrete floor already in the room, and over this will go 3 in. more of concrete. Walls and ceiling are insulated with 9 in. of rock cork.

A floor-type Bush water defrost coil to go into the room will be supplied with a 5-hp. water-cooled Mills condensing unit, which employs well water for condensing purposes. The machine will be located just outside the cold room in the section of the building that is used for slaughtering of horses.

The ranch does its own slaughtering, placing the meat in large, 6-in. deep trays for freezing and storage, after which it is thawed and fed to

the foxes as needed.

While this installation at the Michigan International ranch here is by no means the first of its type, the timing is rather important. Fox ranches in general have been hit pretty hard in the past year by changing fashions in women's clothes and accessories, points out Mrs. Greenberg.

Fox furs have fallen into milady's disfavor and aren't being purchased or worn, she says, but she feels quite confident that the fashion cycle will get back to foxes soon.

In the meantime, the very considerable operating expenses which the new refrigeration equipment will allow the operators to save should help the ranch considerably through this slack period.

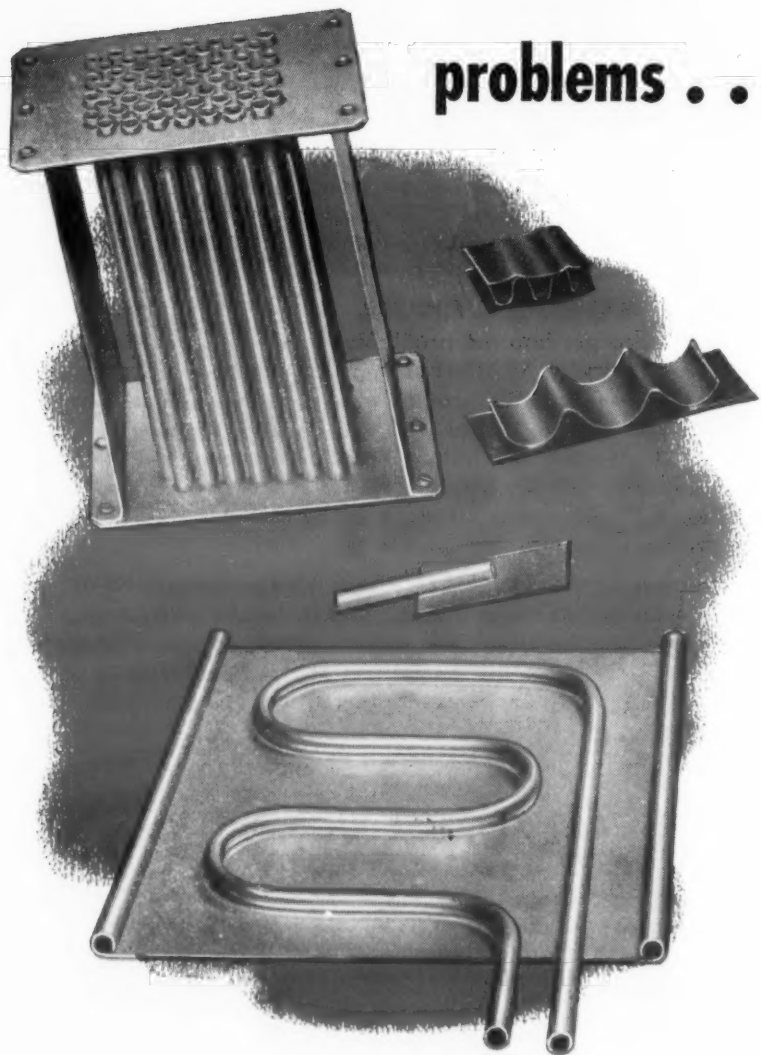
THIS ALUMINUM SANDWICH

helps solve

these assembly

problems . . .

by brazing



The sandwich is Alcoa Aluminum Brazing Sheet, shown in cross section above. A sheet of Alcoa Aluminum is clad on one or both sides with low-melting filler material. When an assembly of parts formed from brazing sheet is sent through a brazing furnace, the filler material melts, flows into the joints, and produces a strong brazed structure.

Alcoa Brazing Sheet offers almost limitless possibilities for low-cost, high-speed fabrication of evaporators, trays, small condensers, and other refrigeration parts. Forming operations are normal, since the layers of filler material are not separated by stamping, drawing, and bending.

Let our engineers help you determine where Alcoa Aluminum Brazing Sheet can be used advantageously in your fabrication processes. ALUMINUM COMPANY OF AMERICA, 1975 Gulf Building, Pittsburgh 19, Pennsylvania. Sales offices in leading cities.

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The FOGEL Improved "Armor-Clad" Walk-in Cooler



"RUGGED"

Solid, sturdy construction makes this rugged FOGEL "Armor-Clad" Walk-In Cooler the best in its class. This famous FOGEL-Improved cooler has many noteworthy advantages, such as:

- ★ Portable and sectional . . . easily enlarged to fit your customers' growing needs.
- ★ Easily erected by two men.
- ★ Beautiful aluminum exterior, rust-proofed steel interior.
- ★ The combined knowledge and efforts of master craftsmen and top-flight engineers, have gone into the exclusive design, construction, and operation of this cooler to give YOU a sure sale profit maker.

You can depend on the FOGEL-Improved "Armor-Clad" Walk-In Cooler for lasting customer satisfaction. Feel welcome to write for further information concerning these, or other, FOGEL Quality-Engineered refrigeration items.

Now Available for Immediate Delivery

One franchise gives you a complete commercial refrigeration line.

FOGEL REFRIGERATOR COMPANY

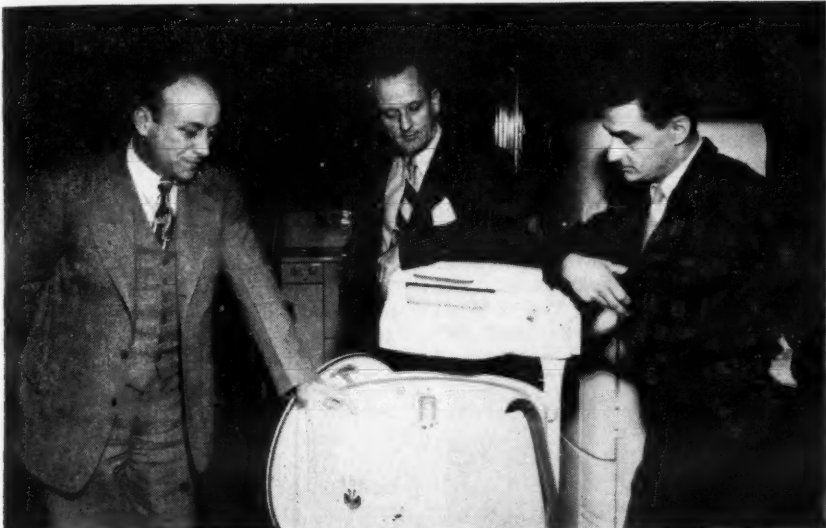
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Quality manufacturers, for almost one-half century, of Display Cases, Reach-Ins, Walk-Ins, and Freezers.

Field Report

In the "Field Report" the editors and staff correspondents of the News bring to the readers, not only their own opinions and interpretations, but report what distributors, dealers, and service contractors are currently finding out about the market, prices, service charges, and all the other problems that arise in distributing the industry's products.

Demonstration Wins Better Sale



William Rambo (left), appliance salesman for Saginaw outlet, shows Furniture Buyer Al Hume and Service Manager John Billy how washer demonstration helps get most out of special promotions.

Dealer Finds 'Bargain' Offer a Tried-and-True Remedy for Temporary Lull In Appliance Buying

SAGINAW, Mich.—With many of Saginaw's once-eager postwar appliance consumers now reportedly playing "hard to get," specialty selling has returned to at least one local retail outlet.

When demand for the name-brand washer handled by this dealership began to drop off, the store turned to an old but tried-and-true promotion in an effort to stimulate sales. In addition to the nationally-advertised washer, the promotion involved a cheaper washer of another make and several surplus items.

An advertisement was run in the local newspaper offering customers a \$40 saving through purchase of the less-expensive washer (listing at \$129.95), a \$7.95 folding ironing board, \$5.95 ironing board pad and cover, \$11.95 automatic electric iron, and \$3.50 folding-type step stool—all for \$118.

When customers came to the store in response to the advertisement, the name-brand washer was being demonstrated. After being shown the "bargain" washer, patrons were urged to watch the demonstration of

the more expensive make. Result: many householders were sold on the costlier machine, it has been reported.

The president of the concern explained that he was more interested in pushing washers than refrigerators, for example, because of the higher mark-up on the former. He also carries furniture, which has, it was noted, even a greater mark-up.

NON-SPECIALTY STORE

Incidentally, this dealer recalled that he had handled one top line of appliances exclusively prior to the war but had switched to other lines and added furniture when he started postwar operations. This was done, he said, because he didn't want to be dependent on one manufacturer for more than 15% of his business.

This change of policy was also decided upon because, he claimed, the manufacturer he represented was, to his thinking, overly-active in the management of his business. He added that he wanted to decide his policies himself.

Although the store's washer promotion attracted a goodly number of customers, business in general is not what it was in the immediate postwar period. It is now, in the owner's words, "horribly normal."

No one seemed certain whether the business decline was due to the usual winter slump, the beginning of the "readjustment," or just local conditions. An employee of one dealer was inclined to think consumers are holding off purchases until spring because they expect prices to be reduced by then, but another dealer said he had heard no complaints on price levels.

Regardless of the causes for the

buying lull, the retailers interviewed are continuing to prod consumers with a variety of promotional material. All of them advertise regularly in the local daily newspaper and two of them also use the city's two radio stations.

5% FOR ADVERTISING

One of the dealers devotes 5% of his gross income to advertising—a rather substantial allotment for a store in a trading area of 135,000 population.

Of this 5%, it was explained, 3% goes for newspaper advertisements which are run five times a week. The other 2% is spent on a 15-minute program five afternoons a week on one radio station, spot commercials on both stations, billboard advertising in outlying areas, and two furniture mat services.

Although he noted that it is usually difficult to determine exactly how much benefit is derived from a particular type of advertising, this dealer recalled how the value of the billboard promotion had been emphasized not long ago. A couple was in town looking for a store where they could purchase a variety of appliances and furniture, he related.

BILLBOARD MAKES SALE

"As they were passing our store," he remembered, "one of them saw the firm name and remarked: 'Why, that's the store that has the advertisement on the Milford road. Let's go in here.' They came in and we made a big sale."

This firm does not use direct-mail advertising nor does it sell house to house. The latter is considered economically impractical in a city this size (about 100,000).

Another of the town's retailers is planning to enlarge his sales organization and increase newspaper advertising. He also is preparing to distribute educational material on home freezers soon.

An old-timer in the appliance game, this dealer had one particular observation to make on current conditions. He said a recent experience had convinced him that manufacturers will have to exercise more care in the announcement of price changes if they want to keep their dealers.

NO 'BONUS' PAYMENT

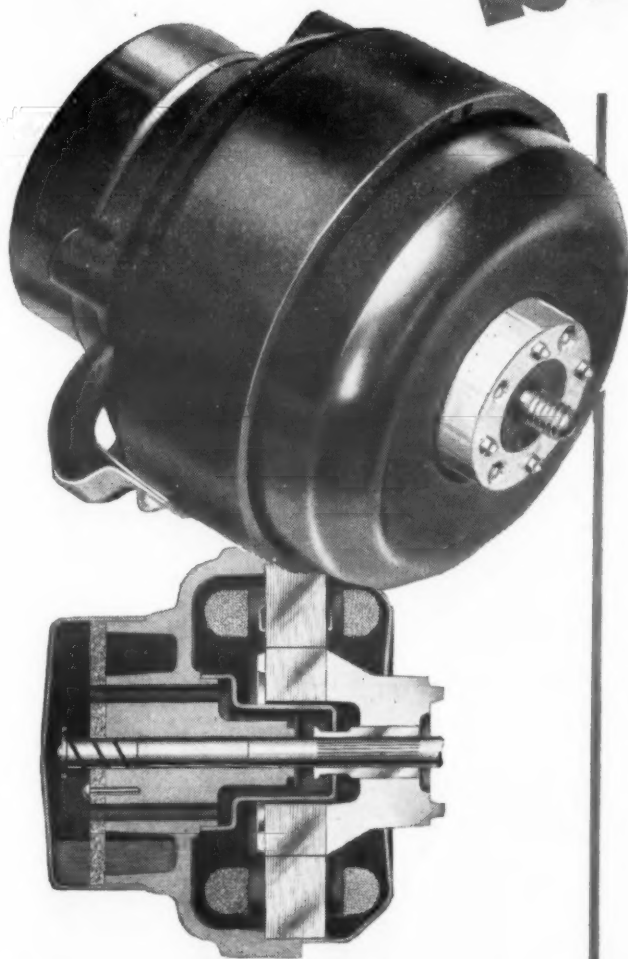
This was the experience he related: An old customer had purchased a range from him shortly after the manufacturer had raised prices. A few days later, the same model was advertised by a competitor at the former price. When the range purchaser saw this advertisement, he called his dealer and demanded:

"Do I have to pay a bonus to do business with you?"

The dealer assured him the price he paid was that recommended by the manufacturer. But the customer was obviously still disturbed by the incident. So, rather than lose the goodwill of a steady customer, the dealer cancelled all orders for the brand of range involved.

During conversations with the manufacturer, the dealer was assured that his competitor had been advised of the price changes and that the situation was being investigated.

"But," commented the dealer, "the damage had been done. I told the manufacturer that when he could promise that such a thing could not happen again, I would be glad to talk about a franchise."



... and power your fan with a
GE UNIT BEARING MOTOR

Available in QUANTITY Now!

The one-piece aluminum, die-cast rotor and totally enclosed construction of these motors assure dependable, service-free operation.

Bearings are positively lubricated—need no oiling during the life of the motor. Following the shaded-pole type electrical design, these motors have the low starting torque characteristics especially suited to smooth acceleration.

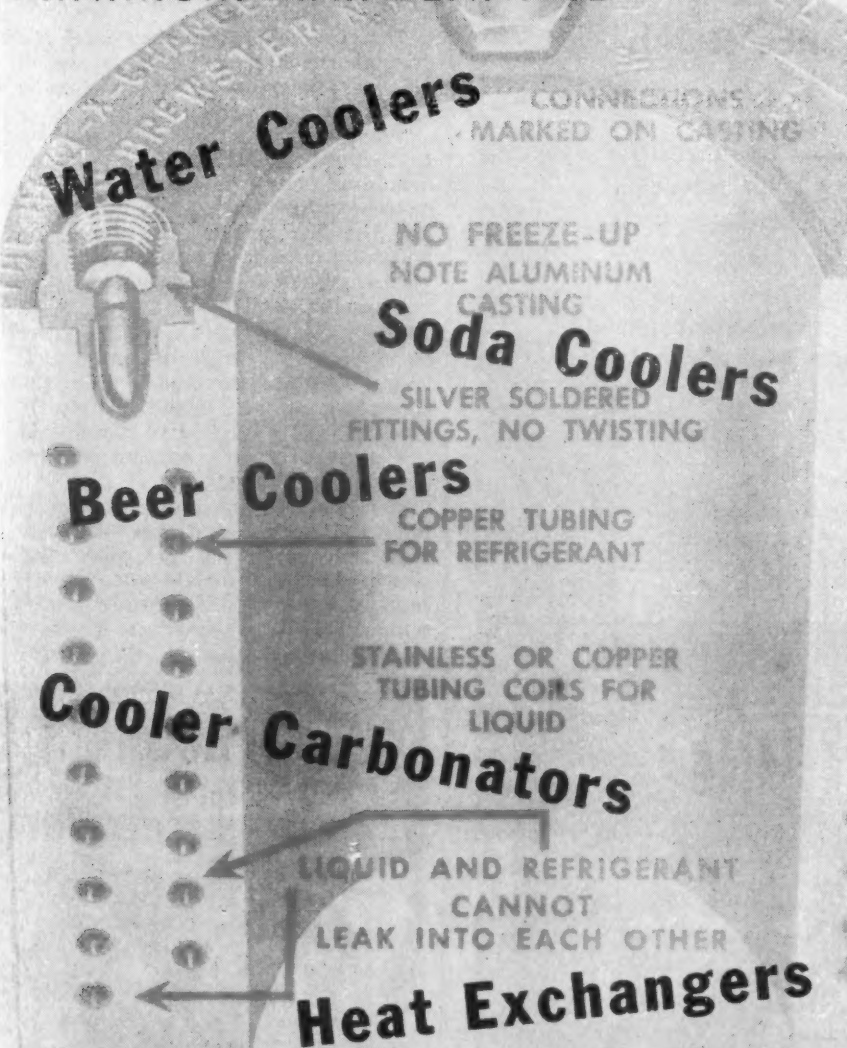
For details on output ratings and frame sizes, write for GEA-4711. Address: Apparatus Dept., General Electric Company, Schenectady, New York.

OTHER APPLICATIONS

Unit Bearing Motors are also used on a miscellany of equipments—pumps, ironers, agitators, animated displays and ticker tapes. Here is an inexpensive, quality motor that can be installed and forgotten. Check your motor needs—the Unit Bearing Motor may be just what you're looking for.

GENERAL ELECTRIC

USE HEAT-X AND BE SURE
of MAXIMUM EFFICIENCY and
MINIMUM MAINTENANCE



Simple, Sanitary, Compact. They require but small refrigerant charges. Sanitary operation. All tubing embedded in aluminum.

THE HEAT-X-CHANGER CO., INC.
415 Lexington Avenue, New York 17, N. Y. Brewster, N. Y.

Washers Account for 84% of Sales as Maytag 'We'll Stay Out of Range Selling--If,' Says Utility

Profit of \$7,101,579 Attains All-Time Peak

NEWTON, Iowa—Maytag Co. registered net sales of \$56,916,620 and a net profit of \$7,101,579 in 1947 to set an all-time record and more than double the 1946 figures, Fred Maytag 2d, president, reported to stockholders.

Net sales in 1946 totaled \$26,822,498 and net profit \$3,027,930. Last year's net profit is equivalent to \$3.78 a share on 1,617,921 common shares, compared with \$1.26 a common share for 1946. Both figures are after Federal taxes, which amounted to \$4,781,000 last year and \$2,100,000 the preceding year.

Maytag's report listed assets of \$17,764,855 and liabilities of \$7,042,466 as of last Dec. 31. These figures compare with assets of \$10,729,457 and liabilities of \$3,746,218 at the close of 1946.

The company's steadily-expanding output of Dutch Oven gas ranges and home freezers were credited by Maytag with having added materially to dollar volume, although washer pro-

duction alone smashed all records last year. He said washers, including replacement parts, constituted 84% of total sales.

Capital expenditures estimated to be in excess of \$5,000,000 have been authorized for 1948, mainly to produce the Maytag automatic washer, according to the report. Pointing out that the automatic washer will culminate years of development work, the report said it is hoped that the plant will be in operation within a year after construction starts.

Maytag noted that the 55-year-old company produced its 5,000,000th washer last October. The 1,000,000th was turned out in 1927, the second in 1932, the third in 1936, and the fourth in 1941.

Store Set On Second Floor

UTICA, N. Y.—A new electrical appliance store has been opened at 1305 Genesee St. by John A. Payne. The store occupies the second floor of the building in Oneida Square.

(Concluded from Page 1)
the display of our ranges can be referred to local dealers.

"I perhaps should add one qualifying statement regarding this policy," he continued. "We do not think that it will be necessary for us to actively sell electric ranges ourselves. . . . This policy . . . represents a new departure in our merchandising and one which I hope will be successful."

To illustrate just how the Edison Co.'s electric range policy had worked out through the years, Compton displayed two charts covering the years 1928-46. He drew attention to the fact that in the early years when consumer acceptance of the electric range was low, the Detroit Edison Co. vigorously promoted and sold that appliance to stimulate its wider use.

He then pointed out how the increased tempo of utility promotion of this appliance had each time been gradually reflected in rising dealer sales. Once dealer promotion and sales activity were believed to be progressing at a pace intense enough

to guarantee satisfactory load for the utility, Detroit Edison Co. withdrew from range selling.

To use Compton's words: "As sales resistance lessened, we have endeavored to withdraw from active selling and to shift the burden to the dealers."

Such a policy has been and will continue to be followed by Detroit Edison Co. in regard to most major appliances, Compton declared.

"There are exceptions, such as water heaters," he continued, "where the saturation is still very low and where we believe considerable customer education is still required. These items we propose to sell. When it appears that water heaters have become an accepted appliance, we shall, as with the ranges, discontinue their sale."

"It is possible that other major appliances will receive similar treatment when it appears that they represent good load but cannot be economically handled by the dealers."

"I think that you are well acquainted with our water heater and

range installation and service policy. At the present time, we will pay for the installation of clothes dryers and will continue to do so for the next six months. Studies to date indicate that the electric dryer is a very desirable load, but we do not believe that we have enough information yet to determine a long-time policy."

Concerning the matter of traffic appliances, Compton told the Detroit NERA meeting:

"We shall continue to merchandise traffic appliances or convenience items such as irons, clocks, and toasters in our offices. These items are handled primarily for the convenience of our customers and to show them what is available in electrical appliances. Our clerks are instructed to give a complete sales presentation on each item, but if the purchase is made through the dealer next door, we are just as happy and more so."

"In order to meet and overcome increased buyer resistance, all of us are going to have to restrain our organizations in the basic fundamentals of appliance selling. We at Detroit Edison are prepared to help you do this job."

Amplification of this point spotlighted the fact that Detroit Edison now maintains a large demonstration kitchen at its main office for the purpose of training dealer salesmen. They visit the kitchen for one or more days and are actually given an opportunity to cook their own lunches or dinners. Similar classes are likewise in effect for dealer servicemen, Compton added. A water heater manual, currently on the press, will be distributed among dealers very soon.

He likewise recommended the courses in basic selling that are conducted by the Electrical Association of Detroit and the Edison Electric Institute.

Emphasizing once more the importance and practicality of dealer-utility cooperation, Compton said:

"In our opinion you dealers are one of the most important cogs of our promotion and merchandising program. It is our intention to include the dealer in all of our merchandising programs."

"As you know, we now have within our sales department a dealer organization headed by Bill Reagan. It is not large, but if additional promotional effort is required, this staff will be strengthened. They perform several very good jobs for you and for us."

"It is up to them to keep you informed of our advertising program and promotional activities and to assist you in taking full advantage of these programs."

Compton explained how on the "neighborhood store" level space in district offices is allotted to each dealer for a month.

"We are also giving consideration to the use of our offices for dealer demonstrations," he commented. "Because of the nature of our business and the locations of our offices, we naturally have very heavy traffic and we like to make the benefits of this high traffic available to you."

"As I see it, 1948 and the years to come offer an intriguing challenge," Compton concluded. "You can count on us at Detroit Edison to work closely with you to make 1948 the most profitable and progressive year in our history."

Simpson, in his recapitulation of NERA's function and operating policies, announced that the association has worked its dealer-salesman training plan into booklet form. Copies will shortly be available to retailers, he advised.

When indecision GRIPS the customer...



POINT TO THE DU PONT SEAL

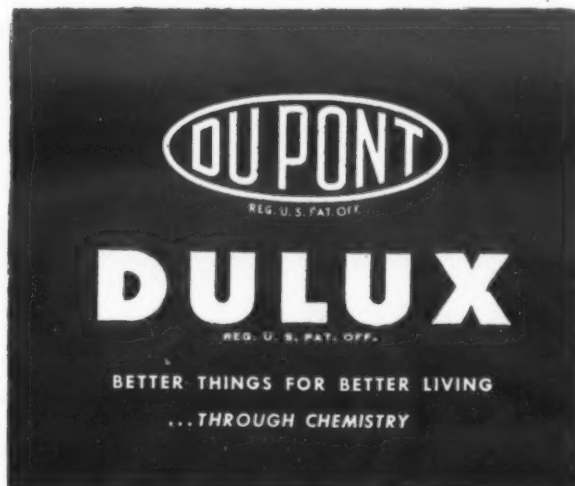
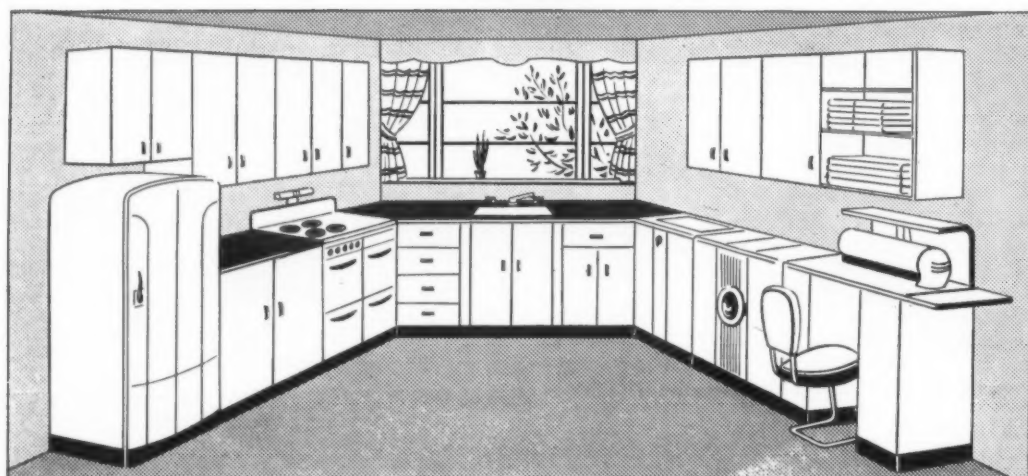
It identifies America's leading kitchen appliance finish!

Folks know and respect the name "Dulux" . . . and pointing out the seal really emphasizes the fact that they're getting a finish that embodies color retention, mar resistance, and outstanding good looks for years of service. All rigidly pre-tested, too!

If your manufacturer supplies you "Dulux"-finished appliances *without* the seal, ask him to include it hereafter. It helps sell prospects . . . assures your customers of the quality of the product.

E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Delaware.





TYPHOON

SELF-CONTAINED UNITS

AIR CONDITIONING

For Small Budgets



Sizes up to 7-tons.

Product of over 30 years of experience

TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 UNION STREET • BROOKLYN, N. Y.

Interpret Illinois Law On Processing Kitchens And Bad Meat Disposal

MACOMB, Ill.—State laws governing processing kitchens used by locker plant patrons, and the locker operator's rights and responsibilities in the disposal of meat that goes bad have been clarified by official interpretations for the Illinois Food Locker Association, Inc.

A number of locker plants in Illinois now have kitchens which patrons may use to do their own processing, reports Marcia L. Knappenberger, executive secretary of the state locker group.

The latest state ruling, which was given by L. D. Oranger of the State Division of Foods & Dairies, came after a new operator was told by a local food inspector that the processing kitchen he planned for patrons was not permissible because only locker plant employees would be allowed in the room.

"Such a kitchen installed in a locker plant," explains Oranger, "must be separate and apart from the processing room, in which case it would not be a violation of the locker law for customers to use same in the preparation and blanching of their own fruits and vegetables."

"However, under no circumstances should the customers be allowed in the processing room of the plant."

The question of disposing of meat that has gone bad was raised by another operator, who wanted to know if he could dispose of the bad meat even without the approval of the owner.

"A locker plant owner," says Oranger, "is required by statute to pass on all food that is brought into the plant for storage and he has the right to reject any foodstuffs which he believes to be in a state of deterioration or which might in any way contaminate other foodstuffs in the locker."

"Our inspectors are always glad to help in the case of a question of 'bad meat,' and we believe the locker plant owners in each case know their respective inspectors."

The state locker group further suggests that operators should make a note on the receiving ticket if there is any question as to the condition of the meat when it comes in, and then if there is any argument with the patron as to the disposal of the meat, the operator should call in the local food inspectors, who can condemn it.

Knoxville Refrigerator Sales Up for January

KNOXVILLE, Tenn.—Washing machine sales zoomed here during January while sales of other major appliances generally showed improvement over December, a report issued by the Knoxville Utilities Board has revealed.

The report, compiled from 38 local dealers, listed a total of 451 washing machines sold during January as compared with 262 in December, a gain of 70%.

Most other major appliances showed gains, but less spectacular ones than the washers. Water heater sales in January were up 37% over December. Refrigerators were up 15% and ranges 6%. Eight dishwashers were sold in January, as compared with seven in December.

Largest drop in sales was reported in ironers. These fell 27%. Home freezers dropped 12½%. Only one waste disposal unit was moved in January. Two were sold in December.

ELECTRICAL APPLIANCE SALES REPORT FOR MONTH OF JANUARY, 1948

	No. of Units	Value
Home Freezers	14	\$ 4,187
Refrigerators	281	78,749
Ranges	289	64,630
Water Heaters	77	9,162
Other Major Appliances	21	2,271
Dishwashers	8	2,241
Waste Disposal Units	1	119
Washing Machines	451	65,001
Ironers	37	5,734
Space Heaters	144	3,691

Don Wright Corp. Organized To Sell Household Appliances

ELMIRA, N. Y.—The Don Wright Corp. has been incorporated to sell household appliances and will do business at 300 Groff Ave. Directors are Donald L. Wright, Robert I. Wright, and Arlena S. Wright.

Chicago Summer Mart Dates To Be July 5 to 17; Hotel Reservations Prevent Shift In Schedule

CHICAGO — Chicago's Summer Market will be held, as announced, July 5-17. After re-canvassing the situation, and consulting hotel officials, American Furniture Mart's Board of Governors and its management have concurred on the originally planned dates.

This was done regretfully since accommodations for home furnishings buyers could not be arranged at any other time. A change of even one day would jeopardize long-standing hotel reservations. (A problem arose since Independence Day falls on a Sunday and will be celebrated on Monday, July 5.)

These factors were included in the announcement of the dates, as originally planned, by Col. Lawrence H. Whiting, Furniture Mart president. The dates, set far in advance, and confirmed at the recent Winter Market, caused hotels to schedule other events for the week preceding and following the selected period. Eight

conventions are planned for the week of June 28; a road builders' convention and a huge railroad exposition both beginning on July 15 follow the market dates. A million persons are expected in Chicago for the railway show on the lake front, between July 15 and Labor Day.

Hotel officials insist that to change the date of the Furniture Market would disrupt long-standing commitments and existing hotel reservations.

"Many buyers will elect to arrive on Tuesday, July 6," Col. Whiting said. "The Mart will be well prepared to take care of them and do its best to see that none are inconvenienced. Arrivals on Tuesday will relieve the registration load always noticeable on the opening days. Those who plan to arrive on Tuesday should make certain their hotel reservations will be honored."

"Buyers have been spreading their attendance over the entire two-week market time. At the recent Winter

Market of 1948, 31% of the buyers came the second week. With more merchandise available, they can safely do their buying then."

"In the meantime, the dates for the years ahead, which in some instances have been misquoted, are as follows:

1948	Summer—July 5-17
1949	Winter—Jan. 3-15
	Summer—July 5-16
1950	Winter—Jan. 2-14
	Summer—June 26 to July 8
1951	Winter—Jan. 8-20
	Summer—July 9-21."

NERA Trade-In Guide Put In Hands of Dealers

CHICAGO—The first issue of the Nera Appliance Trade-In Guide, published by the National Electrical Retailers Appliance Guide Co. has been mailed to members of the National Electrical Retailers Association this week, reports C. C. Simpson, managing director.

By special arrangement with the guide company, Nera members receive one copy of the guide free of

charge. Additional copies, and copies desired by non-members of Nera, are available at \$5 per copy, with special prices for quantity purchases.

Simpson stated that the first edition of the guide is not complete. He said, however, that additional supplemental information will be furnished throughout 1948. Dealers who receive the guide as members of Nera, or purchase the guide from the guide company, will receive these supplements free and will also receive a free copy of the 1949 Guide on publication.

The 1948 Guide contains information on leading models of electric refrigerators through the last full year of pre-war production. Also included, although less complete, are sections on electric ranges and washers.

The supplemental information scheduled to be issued later will cover: information on refrigerators for the years 1942-47; information from additional nationally known washer manufacturers; information on additional brands of electric ranges, including models, specifications, prices, etc.; a section on vacuum cleaners, including the models, specifications, and prices.



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and installed—\$239.95



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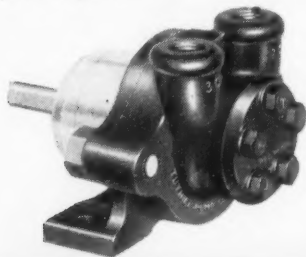


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Strong Arguments Are Advanced For Exempting Refrigeration Contractor From Wages & Hours Law

Federal Administrator Seeks More Proof That Most Work Is Done For Exempt Retail Establishments

NEW YORK CITY—Federal Administrators of the wage and hour laws under the Fair Labor Standards Act have given consideration to some of the contentions for exemption raised by representatives of refrigeration contractor groups, but are not as yet willing to grant complete exemption on the grounds—submitted by industry representatives that the usual commercial refrigeration contractor engages in a retail and service type of business, intrastate in character.

That's how the matter lines up following a series of conferences by Nathan Edelstein, executive vice president and counsel for the Refrigeration & Air Conditioning Guild of New York, and chairman of the Legislative Committee of the National Association of Refrigeration Contractors, with officials of the Wage and Hour Division of the U. S. Department of Labor.

Edelstein submitted a brief to the Administrator which describes the problems of the commercial refrigeration contractor as follows:

"Usually a commercial refrigeration man does not buy his materials, his machines, his repair items direct from the manufacturer. These mate-

rials and merchandise are generally bought from a refrigeration supply jobber, who generally has his place of business in the same State as the refrigeration contractor.

"Then this commercial refrigeration contractor uses these materials to repair refrigerators or refrigeration equipment that are installed in commercial establishments such as butcher shops, florists, bakers, candy stores, etc. At no time has he bought any material out of the State and at no time has he repaired refrigerators which are going to be used as goods that are in production for interstate commerce.

"In the Jones & Laughlin Steel Case in 1937, the Supreme Court of the U. S. said,

"Undoubtedly the scope of this power must be considered in the light of our dual system of government and may not be extended so as to embrace effects upon interstate commerce so indirect and remote that to embrace them, in view of our complex society, would effectually obliterate the distinction between what is national and what is local and create a completely centralized government. The question is necessarily one of degree."

"Therefore, even though the commercial refrigeration man receives from a supply jobber, who in turn receives his goods in interstate commerce, the commercial refrigeration contractor has nevertheless bought this material in intrastate commerce since the goods have come to rest in commerce within the State and since the interstate character of the supply jobbers business is too remote to be imputed to the business of the commercial refrigeration contractor.

Strictly Intrastate

"The commercial refrigeration contractor doing work for butchers, florists, bakers, candy stores, etc., must still be considered intrastate, since such customers are not doing business in interstate commerce. . . . The reason the latter problem is being emphasized is because the opinion of the Administrator in I.B. No. 6, June, 1941, distinctly states in Section 25, that a commercial refrigeration contractor is definitely one which is covered under the Act.

"A good deal of confusion has arisen because a commercial refrigeration contractor, reading the opinion of the Administrator, to wit: that a commercial refrigeration man as differentiated from household refrigeration is covered in under the Act, does not read beyond that paragraph, and assumes that all his operations, because he is in commercial refrigeration, is covered in under the Act.

"Much confusion can be eliminated if the definition between exemption under 13(a)(2) and non-coverage under the Act, because of the intrastate character of the business is more clearly indicated by the published opinions of the Administrator in the interpretive bulletins.

"Having eliminated the above question from the problem, we come to the main point of this argument. We respectfully differ with the opinion of the Administrator as to the meaning of the word 'retail,' and its application to a commercial refrigeration contractor who does business with the ultimate consumer. We wish to convince the Administrator that his opinion ought to be changed since as is stated in the U. S. vs American Trucking Association, the U. S. Supreme Court stated that the interpretation expressed in the interpretative bulletins of the Dept. of Labor, Wage & Hour division, are entitled to great weight.

"If the Administrator is so convinced, notwithstanding the prior opinions and decisions of the Supreme Court, in any future case, the Federal Courts would follow very closely and listen very attentively to the new opinion of the Administrator. The Act itself clearly indicates that the Administrator shall from time to time seek the advice and opinion of industry committees.

"We maintain that a commercial refrigeration contractor, who buys his supplies from out of the State and sells or services within the State is entitled to the exemption under 13(a)(2), since his operations deal with the ultimate consumer on a retail basis. Quoting from I.B. No. 6, June, 1941, the Administrator stated under Section 9,

A 'Retail Establishment'

"Retail establishments . . . possess a number of common physical characteristics . . . retail establishments usually have selling counters, cash registers to ring up sales, shelves for the display and convenient arrangements of merchandise, and display windows to attract the patronage of the general public. The retail establishments maintain a stock of merchandise on hand and normally make sales over the counter on such stock. They do not have manufacturing equipment or other machinery normally found in factories. The foregoing attributes are not rigid criteria to be applied with the mathematical precision since retail establishments vary even with respect to these matters."

"We maintain that commercial refrigeration contractors do maintain such retail establishments as defined in Section 9. We quote from section 10 of I.B. No. 6.

"A retail establishment is characterized by numerous small sales. It sells merchandise in small quantities and at prices which are higher than the prices involved in sales by wholesalers or jobbers."

"We maintain that a commercial refrigeration contractor does have numerous small sales and does buy his supplies, materials, and merchandise from wholesalers and jobbers at a lower price than sold to his customers, and sells only one or two items to an ultimate consumer. We maintain that a commercial refrigeration contractor is patronized regularly by the general consuming public since his business place is usually a store on a main thorough-

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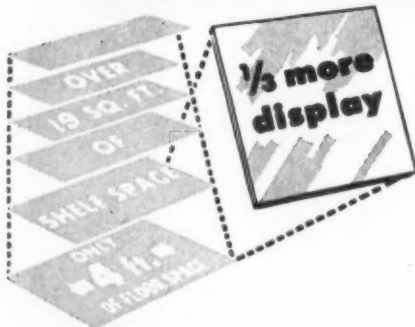
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How Contractors Stand on Wage-Hour Law

The exact status of commercial refrigeration contractors with respect to the wage and hour regulations of the Fair Labor Standards Act has never been clearly defined, at least on the national basis. Some local and regional administrators of the act have tended to rule that the employees of these firms are covered, but even at this level there has been no clear-cut policy in evidence.

Local wage-hour officials often point out that some employees of a commercial firm may be covered, while others are not; likewise an employee could be covered one week, but not the next.

A serviceman, for example, who performs repair work on a piece of commercial equipment pursuant to a guarantee made by an out-of-state manufacturer, would be covered by the act, say these officials. Likewise, a switchboard operator who handles long distance calls from another state would be covered.

Employees of some commercial refrigeration firms in a community might be covered, while other firms are not. An inspector for the Wage-Hour Division may have made a "spot check" of this firm, or disgruntled employees or even competitors might have "suggested" that the Division investigate.

One thing is certain, and that is the fact that the status of commercial firms under the act is still uncertain.

Contractors Claim Wage-Hour Exemption--

(Concluded from preceding page)
fare with refrigerators on display for purchase by consumers.

"They do not refuse to sell to the general consuming public and, therefore, fall under the definition under paragraph 11 of the I.B. No. 6. The sales are made for direct consumption and are not for purpose of resale or redistribution in any form as indicated in paragraph 12 of I.B. No. 6.

"There is nothing in the Statute that states that a retail establishment must sell goods to private individuals or to ultimate consumers who are members of the general public for personal or family consumption. The act merely states that the establishment or services must be retail.

"The definition of 'retail' in the *Funk & Wagnall's New Standard Dictionary of the English Language*, unabridged, defines the word 'retail' as 'to sell in small quantities, especially by those who have bought in larger quantities to resell at a profit.' Also the definition of 'at or by retail, in small quantities, little by little.'

Who Is Ultimate Consumer?

"There is nothing in the definition of retail which says that it must be a private person or to a family. It merely says that the goods are bought in large quantities and sold in small quantities. That's what the commercial refrigeration contractor does. He sells one refrigerator at a time to an ultimate consumer. The meaning of personal for family consumption is that of the Administrator and is not stated in the Act itself. Since the Administrator uses the definition of retail establishment, the same opinions are hereby reiterated in reference to statements made by the Administrator in paragraphs 22, 23, 25 and 27 of I.B. No. 6."

It was, therefore, argued by the Guild and N.A.R.C. representatives that commercial contractors should be exempt from the Wages and Hours Law,

(1) where the contractor bought all his supplies, serviced and installed all his equipment, only in his own state, and for customers who were not doing business in interstate commerce or producing goods for use in interstate commerce, and

(2) even if he did receive his supplies from out of his home state, but more than 50% of his business was with customers who themselves were exempt under 13 (a) (2) of the Act. It was contended that Congress had not meant to include small businessmen such as commercial refrigeration contractors.

"In the Roland case, the Supreme Court makes particular mention of testimony at that time of Assistant Attorney General Robert H. Jackson, before the joint House and Senate Hearing of the 75th Congress, 1st session. This hearing was held on Wednesday, June 2, 1937 which tended to explain the legal phases of the bill. The pertinent pages were page 1 to page 89 of the Report of that joint hearing. The following starting with pages 24, is an excerpt

of that hearing which has a bearing on the legislation intent and history for 13 (a) (2)."

"Chairman of Senate Committee on Education and Labor, Senator Hugo L. Black asked, 'Would you explain, under just what circumstances only, it would be possible for the regulation of retail establishments and small business enterprises to come under this bill?'

"Mr. Jackson—I will try to. It was not intended by this bill to apply generally to retailers or to apply to the service trades, such as the filling station attendant, and the pants presser and small business generally. . . .

"If it were 15 [employees], for example, it would not affect any retail or service trades business, with a smaller number of employees under any circumstances. But then, there are only two ways in which a retailer, for example, would be affected by this bill, as it now stands, and disregarding that exemption. One would be the retailer who is located close to a State line, and sold his goods by delivery across a State line and the other would be the case of a local retailer who by his labor practices and standards were able to affect the interstate movement of goods. . . .

"Practically, the situation in which a local merchant might be affected would be if he were moving his goods in the course of delivery across the State line to a substantial extent so that he were engaging in interstate commerce; but generally speaking the policy of the bill is not to include the service trades and small business and the retailing enterprises.

"The Chairman—And the bill shows on its face, does it not, from the beginning to the end, that it is intended to provide standards for those business units that are actually engaged in and substantially and materially affecting interstate commerce.

"Mr. Jackson—That is right."

A communication to Edelstein from William R. McComb, Administrator of the Wage and Hour law, states the following:

"Since most of your members apparently handle only commercial accounts, and do not perform services for private consumers, their establishments could not qualify for exemption under section 13 (a) (2). However, it is possible that some of their employees may be exempt under this section in certain workweeks.

What Administrator Said

"If a particular employee is engaged solely for an entire workweek installing or servicing refrigeration equipment in retail establishments, such as delicatessen stores and florist shops, which themselves qualify as exempt retail establishments, under Section 13 (a) (2), the particular employee so engaged would be regarded as exempt for that workweek.

"But the performance during that week, of any work in a non-exempt establishment or in the contractor's

place of business (for example, any repair work done off the premises of the retail establishment where the equipment is being serviced) would destroy the exemption for that week.

"Of course, the fact that an employee is not exempt under section 13 (a) (2) does not necessarily entitle him to the benefits of the Act, since the question of exemption is material only where an employee is otherwise performing work which is within the coverage of the Act."

In his conferences with Wage and Hour Division officials Edelstein gained the impression that they believed that certain cases decided in Federal Courts backed up the contention that if a firm does a service for any customer for commercial use and not to private individuals or to ultimate consumers who are members of the general public for personal or family use, it was exempt under section 13 (a) (2) of the Act.

Edelstein contended that a commercial refrigeration contractor should be exempt because his customers were almost entirely those who were neither engaged in interstate commerce, nor producing goods for interstate commerce.

The Administrator's office expressed interest and asked for further information on the commercial refrigeration contractor's operations, such as (1) average annual gross business; (2) average number of employees; (3) description of a typical sale; (4) description of a typical customer; (5) definition of the work of a refrigeration contractor; (6) tracing of a particular transaction, that is, the receipt of a reach-in box from a distributor within the City, the sale of the box, installation, service for the guarantee period, service thereafter.

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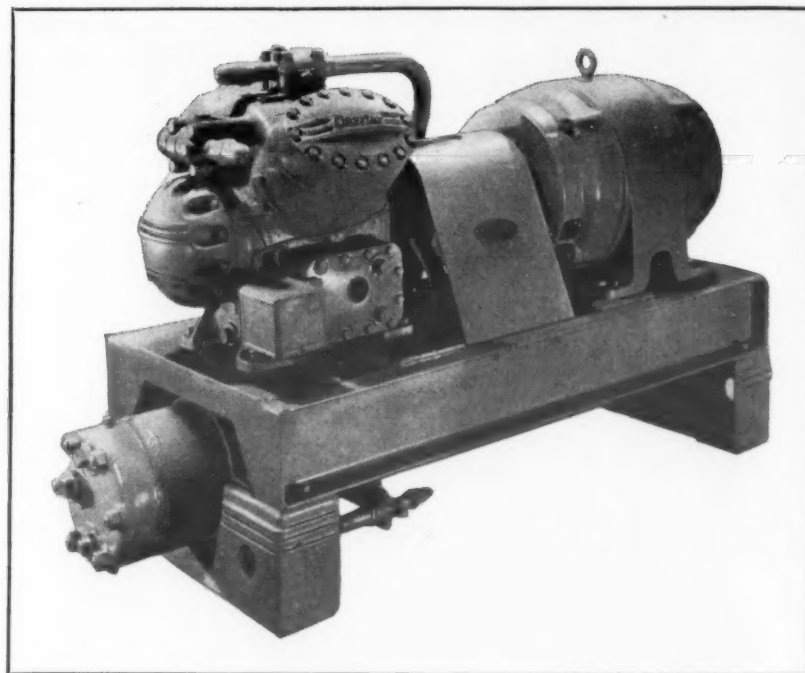
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VOLUME 53, No. 12, SERIAL No. 992, MARCH 22, 1948

'Sins of the Fathers'

BUSINESSMEN often are at a disadvantage when they argue politics and economics with left-wingers. They're on the defensive, and they know it. That's why they often come out second-best. The phony "liberals" keep 'em off-balance by accusing the businessmen of crimes they haven't committed.

At the outset, left-wingers assume that businessmen are predatory and selfish. And they cite history to prove their point. Because some businessmen in previous eras exploited labor, took unconscionable profits, charged all the traffic would bear, and were misquoted as saying: "the public be damned," present-generation businessmen are condemned for things they don't do, haven't done, and wouldn't even try to do.

All human beings are selfish and predatory and nasty at times—especially when they get a chance to throw their weight around. Left-wingers, like the haughty tycoons of past generations, abuse power whenever they get on top (look at Russia today, and the Germany of a few years ago; look at American labor union bosses). But present-day businessmen, who are no more nor no less selfish than other humans, seem to harbor a mass inferiority complex which stems from the sins of the "robber barons" who had things their own way fifty years ago. They could rid themselves of this complex by analyzing current history.

If they'd do this, they'd learn that labor bosses and communist dictators are selfish and grasping, too. These "characters" create monopolies, and protect their gains by stifling competition, just as readily as greedy industrialists used to do. There's this big difference:

Left-wingers get control through politics.

Businessmen get power through economics.

Political power is absolute, and can be perpetuated.

Economic power is limited, and can be supplanted.

When competition is allowed, anyone with a new idea, or an in-born willingness to work harder, can come along and do a job cheaper or better than those who are currently in the saddle. In consequence, economic power always can be wrested from its owners in a nation which fosters and protects freedom (the United States of America is a prime example). Competition, freedom, and progress are all synonymous.

You have to be good to get economic power. What's more, you have to improve to stay on top. The champion never has a chance to relax. Economic power has no security or stability. It's continually uneasy, and subject to recurring crises. Political power, however, can be retained long after its possessors have outlived their usefulness. Controlled economies (feudal, fascist, or communist governments) can be upset only through bloodshed and revolution.

Economic power is exercised by daring, inventive, risk-taking individuals. Political power is exercised by demagogues who ride high on the backs of emotionally-led masses. And those who wield political power make mass decisions on such a gigantic scale that they not only destroy Liberty (and human happiness in the bargain) but are sure to make colossal errors. These Gargantuan errors, when perpetuated (as they often are when a "gang" retains political power) keep people poor, ignorant, and petulant.

Errors made by those who possess economic power, on the other hand, usually unhorse the riders whose judgment was bad. New horsemen enter the race, and progress resumes.

One of the reasons why the church is no longer a potent factor in the lives of most men—a fact deplored by many thinkers nowadays—is that in medieval times the church got into politics. Wars resulted. So, after great struggle, many nations succeeded in separating the church from the state. But the perpetual battle between the apostles of Control (political power) and the disciples of Freedom (economic power) continues unabated. Currently there is a new menace: the unholy alliance of Organized Labor and the State. To millions of uncomprehending people, Unionism has become a religion. So has Communism.

People who mistakenly think that they'll be better off if "government" owns everything are unwittingly underwriting another religious war. And World War III, when it comes, will return its few survivors to the caves.

Massachusetts Resort Set for ASRE Spring Meeting May 31-June 2

NEW YORK CITY—Nine technical papers on as many fields of refrigeration will be the feature of the 35th Spring Meeting of the American Society of Refrigerating Engineers to be held in Swampscott, Mass., May 31 to June 2, 1948. The Boston Section of the society will act as host for the occasion.

Headquarters for the meeting will be the New Ocean House which overlooks the Atlantic Ocean. The recreational facilities at the hotel will be a special attraction to A.S.R.E. members and guests . . . golf, tennis, and every recreational feature that appeals to riding, boating, fishing, and archery enthusiasts.

The nine papers scheduled for the technical program will be presented in three morning sessions on Monday, Tuesday, and Wednesday. These will include several on recent developments on heat transfer techniques, detailed description of the new "sniffer" type refrigerant leak detector, and a paper on ultra low temperature installation. The technical program is under the direction of C. M. Ashley, Carrier Corp. engineer who is 1948 A.S.R.E. program chairman.

Swampscott, a suburb of Boston, frequently referred to as the "Eden of New England," is the home of the Swampscott dory.

Atom Smasher Operating Expense Cut by Cooling

PITTSBURGH—A more compact cooling system together with the steel and copper design of the cyclotron-coil of Carnegie Tech's new atom smasher will cut electric power costs required to operate the "smasher" from \$25,000 to \$15,000 yearly, reports Dr. Edward C. Creutz, associate professor of physics.

The setup is unusual in that, to save money, Tech is reducing cooling channels from the conventional 1/4 in. to 1/16 in.

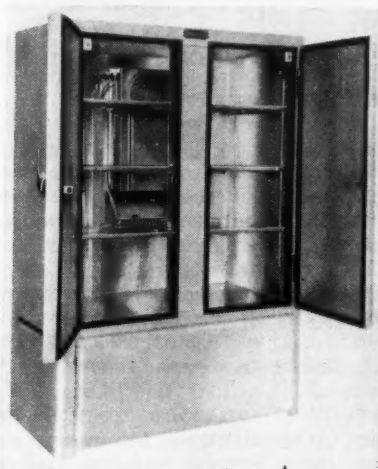
There will be three cooling systems, each operating at a different temperature. The first system will remove 1,000,000 B.t.u. per hour from the copper coil at -40° F.

The second system will remove moisture from the air while operating at 60° F. The third cooling system will operate at 90° F. (a lower temperature would cost more), and will refrigerate traps in the vacuum system.

Most cyclotron cooling systems have used liquid air, but because of the expense, Tech is using vacuum traps.

The new adaption will save Tech 1,000 tons of low carbon steel, or around \$250,000. Idea of making the cooling channels smaller can be used also with transformers or electromagnets which have to be flow-cooled by liquid.

Among 8 Models



This 25-cu. ft. reach-in (Model HR25) is part of Foster's standard temperature line.

Foster Refrigerator Now Introducing New Line of Commercial Reach-Ins

HUDSON, N. Y.—Featuring all-welded aluminum construction, a new line of commercial reach-in refrigerators for standard and low temperature applications has been introduced by the Foster Refrigerator Corp. here, announces Larry H. Foster.

Use of aluminum, according to the Foster claims, assures no rusting and thus improves sanitation; its light weight gives low freight and installation costs, and permits greater mobility. Being highly reflective to radiant heat, the aluminum provides additional insulation and lower operating cost, it is asserted.

Five models are produced in the standard temperature reach-in line, including boxes of 25, 35, 45, 62, and 75-cu. ft. capacities. Like the other Foster refrigerators, these are self-contained models, and are available in white dulux exterior which has been baked on by infrared lamps.

The low temperature reach-in models are available in sizes of 10, 21, and 35 cu. ft. These models are fitted with secondary doors for added protection against heat leakage.

Low temperature self-service display cases of 18, 30, and 40-cu. ft. sizes, and institutional chest type low temperature units of 18, 30, and 40-cu. ft. sizes are also manufactured by the Foster company.

Foster Refrigerator Corp. was founded early in 1946 by Larry Foster, who had been active in refrigeration before the war. During the war he served in the Marine Corps.

Rochester Supermarket Gets Complete Air Conditioning

ROCHESTER, N. Y.—Complete air conditioning is a feature of the new Star Super Market which has been opened at the corner of Thurston Road and Rosalind. It is described as "the most modern food market in the city."

Wilson Refrigeration, Inc. Adds 20,000 Sq. Ft. Plant

SMYRNA, Del.—A new building to house the mounting and testing section of Wilson Refrigeration, Inc., is being rushed to completion here, it has been announced by John E. Wilson Jr., president. The building is planned for use as a bank for all products which have been completely assembled in the cabinet, except for mounting, testing, and painting.

"With this additional space," Wilson said, "a freezer or a milk cooler can be serviced, tested, and be ready for shipment within 48 hours. This of course means that a faster and better distribution system is possible. Such a system will enable distributors, dealers, and customers to receive Wilson products in a greatly reduced time period."

The new addition was started in December and it is expected it will be completed by the end of March. The building is of the Maryland Steel type and is of all-steel, industrial construction. It has a floor space of 20,000 sq. ft. and is a needed addition to the original which occupies 115,000 sq. ft. It is the second building built since the war.

Corporation Names Officers

CINCINNATI—The R. Young Refrigeration Headquarters, Inc., 1424 Central Parkway, has been incorporated with Richard H. Young as president; James Raymond, Sr., vice president; and Anna M. Young, secretary-treasurer. Young has been in the refrigeration business for 18 years.

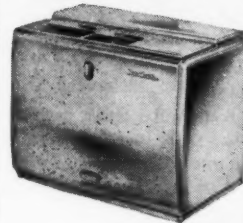
DISTRIBUTORS WANTED!

ORDER FLOOR SAMPLES, AND YOU WILL BUY CARLOADS!

ALERT DISTRIBUTORS AND DEALERS

WILL BE FRANCHISED • BUYERS EVERYWHERE
—FOR BUXTON'S THREE GREAT NEW REFRIGERATORS •
NEW STREAMLINING • NEW ENGINEERING FEATURES

SO COMPACTLY DESIGNED THAT THE SPACE REQUIRED IS ABOUT THAT OF THE AVERAGE 12 Cubic Foot Refrigerator, but you actually get a Refrigerator with 22 Cu. Ft. normal temperature . . . the Combination Refrigerator is 19 Cu. Ft., half Zero—and half normal and the all Zero refrigerator is 18 Cu. Ft.—And the BUX-TONAIRE DRY Cooler for bottled beverages and food products.



All inquiries will be personally contacted within a few days.

Manufactured by

BUXTON, INC.

1960 E. 48th St. Phone LUcas 8158 Los Angeles (11) Calif.

For descriptive literature—price lists and territory information write, E. George Sanders, General Sales Manager, at our temporary National Sales Offices, 3120 N. Main Street, Dayton, Ohio, or if you prefer phone him Dayton time 9:30 a.m. to 4:30 p.m.

ENGINEER WANTED

We require an assistant chief engineer for a permanent position with the following qualifications:

Graduate engineer. Thorough knowledge of rating refrigeration and air conditioning coils. Practical field experience covering coil and compressor problems. Must be aggressive and ambitious. Age 30 to 40 years.

The position is one of responsibility, and an excellent opportunity awaits the man who can qualify. Give complete resume of yourself in first letter.

BETZ CORPORATION, Hammond, Indiana

YOU GET THE BENEFITS OF

The Finest Machine Tools

IN EVERY CONDENSING UNIT PRODUCED BY UNIVERSAL COOLER

Fine, Modern Specially Designed Tools Mean:

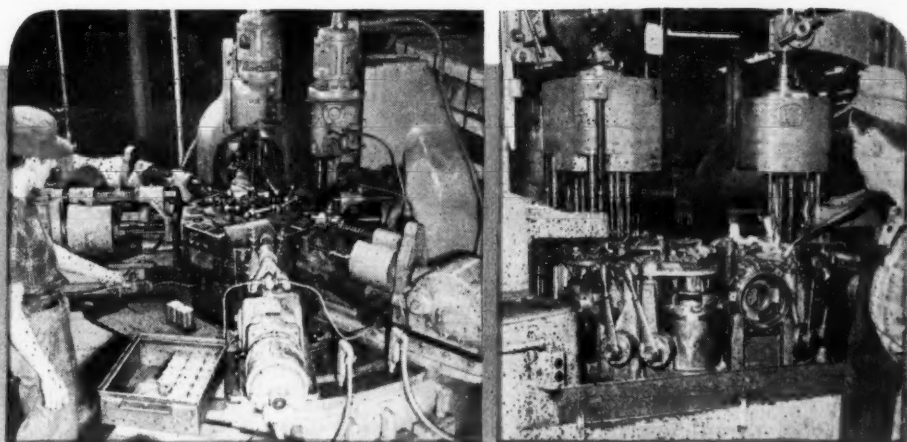
● Closer tolerances than would be possible with ordinary machines.

Economies not possible except where modern machinery is used in mass production.

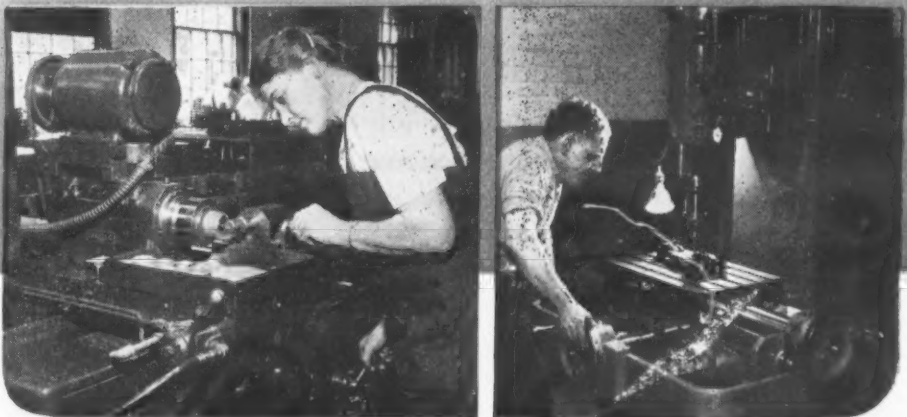
Uniformity of product, essential to uniform dependability of condensing units.

It takes resources to provide costly equipment. Yet, spread over big volume production, fine tools effect real economies that are passed on to you.

Write or wire today—learn how your refrigerating problems can be solved—the Universal Cooler way.



A few of the many modern machine tools used to produce U. C. Condensing units.



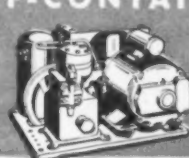
HERMETICS



REMOTES



SELF-CONTAINED



UNIVERSAL COOLER

DIVISION INTERNATIONAL DETROLA CORPORATION

MARION, OHIO • BRANTFORD, ONTARIO

The NAT PACKAGED

Self Contained

AIR CONDITIONER

EASY TO INSTALL — ECONOMICAL IN UPKEEP

The Nat Air-conditioning Unit is the only one on the market so constructed as to be easily serviced.

*The Answer to the
Service-Man's Prayer*

All working parts are accessible without having to tear down the cabinet.

The NAT comes in 3 sizes:
3.3, 4.2 and 5.4 Tons

The LAST WORD in
Appearance and Performance

Sold through exclusive dealers and distributors
some territory still open—inquiries invited

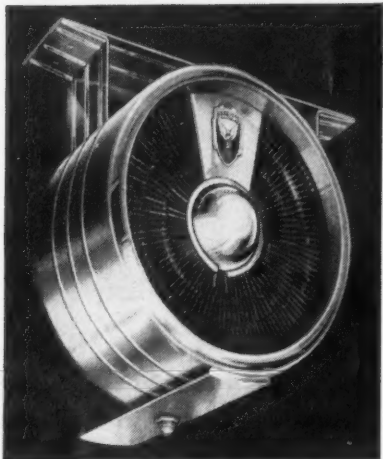
The NAT Corporation

2710 McGee Trafficway • Phone HA. 1892 • KANSAS CITY, MISSOURI

The Nat Corporation also manufactures the NAT Suspended Gas-Fired Unit Heater

What's New

Peerless Unit Cooler Coils 'Waste No Surface'



CHICAGO—A new line of unit coolers with round coils so that all the primary and secondary surface is in the air stream has been introduced by Peerless of America, Inc. here.

"Even the return bends on this coil are in the air stream," the company claims. "There is no waste surface."

The company further claims that the condensed construction of the unit allows it to occupy a small space for the capacities given. The motor is mounted in the center of the round coil.

The line consists of 11 models, three having $\frac{1}{4}$ -hp. motors, four $\frac{1}{2}$ -hp., and four $\frac{3}{4}$ -hp. B.t.u. per hr. capacities at a temperature differential of 20° between air and refrigerant range from 1,300 on the smallest unit to 49,000 on the largest.

Over-all dimensions range from 13 in. by 11½ in. by 6½ in. to 42½ in. by 41 in. by 16½ in. Fan on the smallest unit is 8 in. and on the largest 24 in. C.f.m. capacities spread from 200 to 3,000.

All units are complete with built-in heat exchanger and suction spinner. They can all use "Freon," methyl chloride, sulphur dioxide, or ammonia as the refrigerant.

List prices range from \$59.15 to \$460. Ammonia units are priced 10% higher than the others, according to the company.

Amana Shows First In New Vertical Freezer Line

AMANA, Iowa — Two vertical freezers, one 25 and the other 30-cu. ft. are first in a new line of stainless steel freezers being introduced by the refrigeration division of Amana Society.

The freezers, which Amana emphasizes are in addition to its present line of 5 and 10-cu. ft. Dulux-finished units, have several features in common. Among them are:

1. Vertical design with front-open-



Amana 25-cu. ft. freezer

ing door that permits ready access to items stored inside.

2. A stainless steel finish, inside and out. This easy-to-clean surface won't corrode, or rust. The finish is welded and sealed to prevent moisture infiltration. All door hardware is plated with chromium.

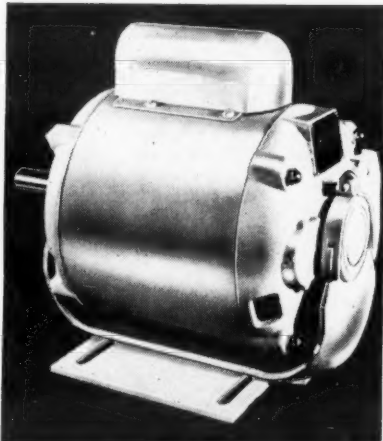
3. Horizontal contact freezer plate shelves for quick freezing.

4. Size: 48 in. wide by 28¾ in. deep by 80 in. high.

One of the distinguishing features of Model 25S is its 25-cu. ft. capacity that holds approximately 900 lbs. of frozen food. This model is powered by a ½-hp. hermetic type condensing unit.

The 30-cu. ft. storage space in Model 30RS can take care of some 1,100 lbs. of food and is refrigerated by a ¾-hp. open type heavy duty remote condensing unit.

A. O. Smith 'Permamotor' Series Is Introduced



LOS ANGELES—Three new lines of general purpose electric motors, called Permamotors, are being manufactured by the A. O. Smith Electrical Mfg. Co., a wholly owned subsidiary of the A. O. Smith Corp., it was announced here.

The lines include fractional horsepower and integral horsepower motors, the latter in both single and polyphase.

The fractional horsepower motors are of the general purpose, capacitor start, single phase type. Available in the 56 to 66 frames with Nema mounting dimensions, they feature

simple, rugged squirrel cage rotors with quiet operating, positive-acting switches, according to the manufacturer.

Bronze sleeve bearings are employed with extra large wool lubrication reservoirs. Pre-lubricated, sealed type, ball bearing motors are also available.

The quick-break switch and positive acting governor is the quietest, simplest mechanism so far developed for this purpose, the company claims.

The integral horsepower, single phase motors are also of the capacitor start type. They are available in 1 to 5 hp. in frames 203, 204, 224, and 225 with Nema mounting dimensions.

Starting capacitors are in the starting windings but the motors are essentially squirrel cage in design, according to the manufacturer. Capacitors are cut out when the motor reaches a pre-determined speed by a positive-acting, protected, enclosed voltage relay. The relay is mounted in a dust-proof, splash-proof, steel box between the feet opposite the terminal box.

The squirrel cage rotor is shrunk on a large diameter, stubby, hot rolled steel SAE 1035 shaft. Fan blades are cast integrally. Bearings are anchored at one end for thrust capacity and to prevent V-belt drives from weaving.

Motors will run either clockwise or counter-clockwise by proper connection of lead wires, according to the firm. Leads are made accessible through a large "mail box" type, waterproof conduit fitting.

Polyphase, squirrel cage, induction motors are available in frames 203 to 326 with Nema mounting dimensions. Motor is protected against dripping moisture and falling objects, and sheds liquids, dirt, and dust easily.

The smooth rounded exterior prevents dirt from collecting on the motor. Fittings are easily accessible for greasing, servicing, and disassembly, the manufacturer states.

The unusually large shaft of SAE 1035 hot rolled steel is claimed to be accurately ground throughout its entire length. Oversize, double shielded ball bearings are the same size and interchangeable, permitting shaft extension from either or both ends of the motor.

The one piece, die cast rotor has ventilating fans cast integrally to the end rings. A spun aluminum deflector directs cool air to the stator coils where it is pulled into the motor by rotor fan blades, according to the company.

Bar Unit Can Be Used With Existing Equipment

WOOSTER, Ohio—Wooster Brass Co. is introducing a new beverage dispensing unit to be sold under the name "Trumpet Select-Flo Systems," which provides two-way service from the same draft arm.

One open position draws a mixed carbonated beverage. The other open position provides only clear sparkling soda water.

Select-Flo is available as a complete self-contained unit in a stainless steel cabinet, or it can be pro-



Wooster Brass beverage dispenser

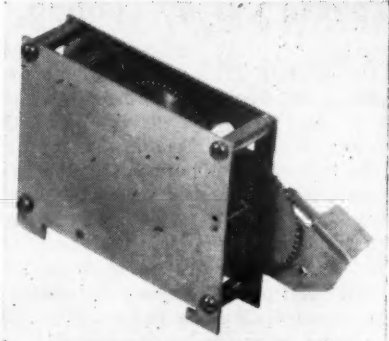
vided for installation right in existing bars and soda fountains.

Basic operating unit consists of a 5-gal., high pressure, stainless steel syrup tank, connecting lines, fittings, and draft arm. Mixing head in the draft arm accurately controls the proportion of syrup and soda water for carbonated beverages.

Draft arms can be installed in any number of locations on bar or counter. These are available in three standard styles; goose-neck, straight arm, and under-the-bar models.

Select-Flo was designed and developed to speed service, save counter space, and reduce work.

Device Times Appliances Without Using Any Oil



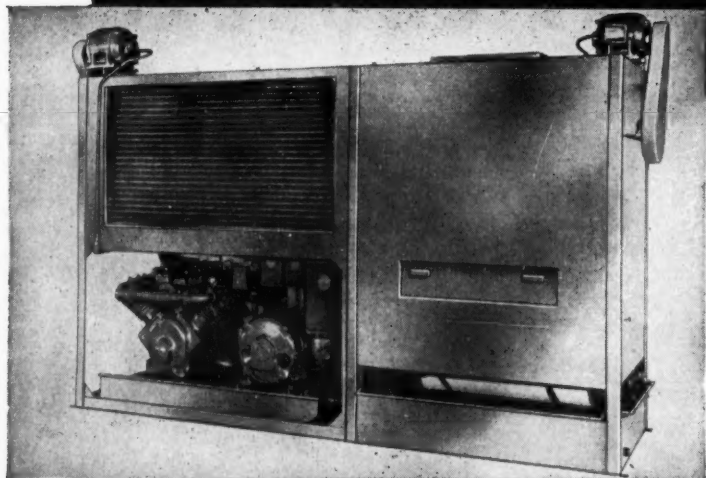
AKRON, Ohio—Mechanical Industries Production Co. here has recently introduced a timing device for toasters and other appliances, which is said to offer greater accuracy, and smoother, quieter, non-positional running.

A new departure in balance and escapement assembly is said to result in efficient timekeeping even under variable spring loading and eliminate the disadvantages usually present in hairspring construction.

No oiling is required for the polished steel pivots operating in brass plates, thereby eliminating timing variations and stoppages often resulting from oil gumming, Mechanical Industries points out.

A rigid pillar-post frame assembly is claimed to assure correct gear alignment even under external stress. Available in 5 min. to 30 min. time ranges with either ratchet or friction drive, the unit measures 1¼ in. x 2½ in. x ¾ in.

GOVERNNAIR offers more in air conditioning equipment!

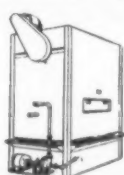


- completely packaged air-conditioner with evaporative condenser, U. S. Patent No. 2,297,928
- make only simple electrical, water and duct connections
- ready to operate
- wide range of sizes (3 tons to 50 tons)
- rapid delivery

Does high quality, and top performance spell VALUE to you? Then, take a close look at Governnair's completely packaged air-conditioners, or at any of its other products. Flexibility, compact design, efficient operation and easy installation prove that GOVERNNAIR is the greatest value known in modern air-conditioning equipment.



AIR-CONDITIONERS



EVAPORATIVE CONDENSERS



UNIT COOLERS



BLAST COILS FOR HEATING AND COOLING

WRITE OR WIRE FOR DESCRIPTIVE LITERATURE AND PRICES

GOVERNNAIR

GOVERNNAIR CORPORATION—513 N. Blackwelder—OKLAHOMA CITY, OKLA.

PIONEERS IN THE MANUFACTURE OF COMPLETELY PACKAGED AIR-CONDITIONERS

EYE CATCHER

● Outstanding in the display case field, the SHERER Model 500 offers food merchants—

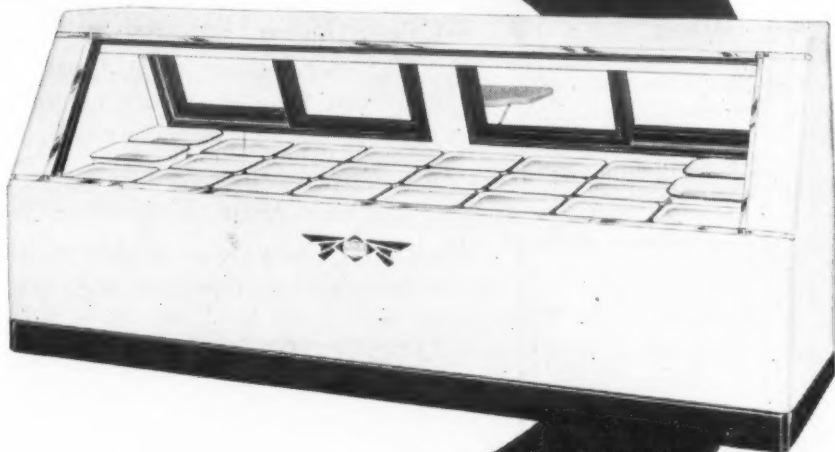
WORKABILITY—easy to work out of

VISIBILITY—customer sees all the display

CAPACITY—3 platters deep on one shelf

BEAUTY—gracefully rounded contours

It has everything expected in a good meat case.



REFRIGERATED MERCHANDISERS

SHERER-GILLETT CO., MARSHALL, MICHIGAN

Operation San Diego

Month-Long Concentrated Campaign By Proctor Shows How Sales Can Be Boosted

PHILADELPHIA—"Operation San Diego," a month-long project designed to determine the effect of a unique, highly concentrated merchandising campaign in any given area, has been completed by the Proctor Electric Co., it was announced here last week by Robert M. Oliver, vice president in charge of sales.

Oliver said that the California campaign was waged to find today's best selling techniques for the retailer and to prepare Proctor's sales organizations for a return to prewar operations on a national basis.

It was in effect, he said, a "tactical exercise to test the strength of Proctor's postwar electric iron promotion under severe competitive conditions." The campaign was a success, Oliver declared, revealing that more Proctor irons were sold in a 60-day period than during the entire year of 1946.

For the last quarter of 1947, following Proctor's opening advertising barrage, Proctor iron sales charts showed an increase of 384% over the comparable period in 1946. And, at the conclusion of the highly concentrated activity, the company's four distributors in that area had stocks aggregating less than 30 days' supply on hand, he asserted.

The San Diego trading area was chosen for test purposes after a painstaking survey because, in the opinion of certain economists, it alone was showing symptoms of a mild recession.

"We wanted a tough market—we found it in San Diego," said C. P. Culbert, the company's western sales manager. "San Diegans in general are cautious spenders, a large part of the population being service, government, and retired folk. Some unemployment had been noted. It was an ultra-conservative market, where postwar sales were showing some decline," he explained.

The population of San Diego city is 362,658; of San Diego county, 552,804. Population of the entire trading area embraced by the Proctor promotion is 640,544.

Proctor launched "P" Day with an all-out attack, admittedly intending to saturate the wholesale and retail markets with the Never-Lift and Champion irons. Inventory at the start of the campaign was twice the 1946 total sales of flatirons in the entire San Diego trading area.

The kickoff came only after careful preparation, during which the support of wholesalers, retailers, representatives of women's clubs, radio stations, the newspapers and civic

groups was enlisted. Also cooperating were the Bureau of Radio and Electrical Appliances and the city's Chamber of Commerce.

Proctor sales representatives and iron demonstrators from 11 western states were shifted to San Diego during the experiment. Headquarters were set up in the U. S. Grant hotel. Here distributors' daily reports were received and checked and breakfast and luncheon meetings held to map staff strategy.

A total of eight full and half-page advertisements were contracted for in each of three San Diego dailies, totalling slightly more than 20,000 lines. On four of the city's radio stations, 208 spot announcements were broadcast.

Fourteen dealers ran 32 tie-in newspaper advertisements—the amount of this dealer cooperation was termed "disappointing," and a total of 230 displayed Proctor promotional material in their stores. More than 1,000 women were shown Proctor's sit-down ironing technique which was emphasized throughout the campaign, during demonstrations at the Orpheum Theater.

In addition, about 100 sales people were given group and individual instruction in sit-down ironing in the theater, in their stores and at Proctor's hotel headquarters. Demonstrations also were staged in the domestic science classes of 11 schools throughout the county before approximately 1,300 students.

San Diego department stores and mail order houses offered close cooperation. Whitney's, Walker's and Grand department stores held organizational meetings, during which the program was outlined and each employee was supplied with cards, inviting customers to attend Never-Lift demonstrations. Sears Roebuck and Montgomery Ward held employees' meetings in their appliance departments. All maintained permanent demonstrations and display material.

No new methods were employed and all "tried and true" promotional media were utilized, it was pointed out. Publication advertising and store demonstrations proved the most effective means of promoting sales, the company found at the campaign's conclusion. Store and window displays were found the next most effective methods.

Dealers reported that sales of all irons increased as a result of the promotion, with those costing more than \$10 accounting for 25% of the remaining sales, and those ticketed at less than \$10 totalling 23%.

Admiral Sales Jump 32% To Hit \$47,898,938; Net Profits Also Show Big Gain Over 1946

CHICAGO—Record-breaking sales and net earnings were attained in 1947 by Admiral Corp., Chicago manufacturer of radios, television, and major appliances, Ross D. Siragusa, president, announced March 16 in his annual report to the stockholders.

Sales were up 32% over the 1946 total, reaching \$47,898,938, compared with \$36,169,850. Net profits, after taxes, were \$2,248,186 compared with \$1,888,625 in 1946, an increase of 19%. This was equivalent to \$2.50 per share of outstanding common stock, of which there are 900,000 shares, compared with \$2.10 per share the previous year.

The company's sound financial position was improved in all areas during the year, Siragusa reported. Bank loans totaling \$1,000,000 were paid off, and in addition the company's net worth increased more than \$2,000,000, from \$5,789,636 to \$7,795,460. The ratio of current assets to

current liabilities was increased from 1.62 to 1, to 2.22 to 1. Inventory on hand at Dec. 31, 1947 was \$4,284,861, compared with \$5,923,714 a year earlier.

Shipments of the television consoles, it was stated, have reached 200 a day and are expected to reach 400 a day by May 1. Admiral will also be on the market this spring with a table model television receiver selling at the lowest price in the television industry.

Although shortages of sheet steel continued to hamper the appliance division, sales of Dual-Temp and standard refrigerators, and of electric ranges, were almost triple the 1946 figures, Siragusa said.

To assure success of its television operation, Admiral is expanding its training program to teach all service personnel of its distributors how to install and service television sets properly.

UTILITY'S BROADCASTS TO PROMOTE APPLIANCE ITEMS

FORT WAYNE, Ind.—Fort Wayne and area household appliance dealers will benefit from the continuance throughout 1948 of the radio program on WOWO of the Indiana Service Corp.'s "The Kilowatt Hour."

During 1947 this program carried 45 distinct commercials plugging for the major appliance dealer. Theme of the broadcast is to make the home electric user keenly aware of what electricity will do. The program is spotted at 1:30 p.m. each Sunday. Examples of the 1947 programs, which will be repeated in similar vein during 1948, included such titles as: The Electric Dishwasher; Electric Water Heater; Automatic Electric Laundry; Electric Home; Modern Living Means Electrical Living With Its Conveniences; Electric Range; Decreasing Cost of Electricity; Electricity on the Farm; Kitcheneering—Leisure Electric Home—Kitchen Planning; All Electric Modern Living; All Electric Farms; and others.

MILLIONS OF REPLACEMENT ICE CUBE TRAYS WILL BE SOLD THIS YEAR!



INLAND has opened a big replacement market with the new "Magic Touch" Ice Cube Tray. In at least fifteen million homes—thousands or perhaps hundreds of thousands of them in your own sales territory—there are outmoded, battered, even useless trays. And now!—here's the Inland "Magic Touch"—the ice cube tray that gives instant service, so much better than ordinary trays that it makes replacement a "must."

A strong campaign to refrigerator owners—running now in leading magazines like the Saturday Evening Post, Collier's and Better Homes and Gardens—nearly 30,000,000 circulation during the spring and summer—that's Inland's pre-selling drive to make

easy sales and quick profits for you. Remember, while it's national advertising it's going direct to your customers and prospects in your territory.

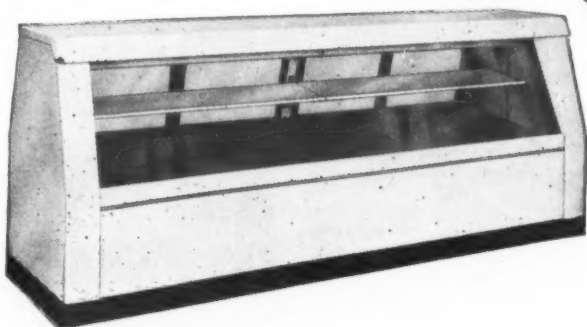
Ride This Wave of Profit—NOW!

Cash in on this big advertising drive. Order Inland "Magic Touch" Ice Cube Trays from your refrigerator manufacturer or distributor. Give them the best display, to meet the advertising-created demand. Push them to service customers. Replacement sales of these so-much-better trays for present automatic refrigerators pay good profits now—and build good will for later refrigerator sales. And insist that the refrigerators you sell come factory-equipped with Inland "Magic Touch" Ice Cube Trays.

INLAND MANUFACTURING DIVISION, General Motors Corporation, DAYTON, OHIO



a case in point

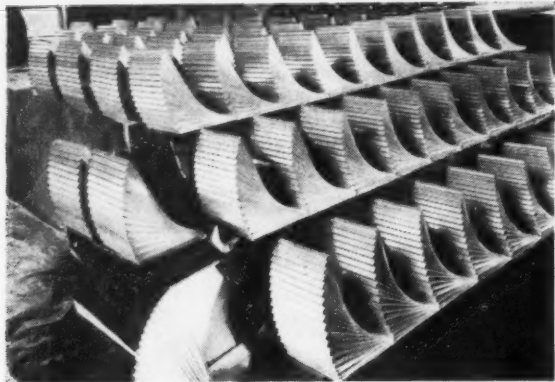


• Here's the refrigerated case that proves our point. As production increases, our dealers and distributors are filling more orders on "the case with the solid selling points". Like to join this select group? Write for information on openings available.

GOLDSMAN

Manufacturers of Commercial Refrigerators
1325 N. LAWRENCE STREET • PHILADELPHIA 22, PA.

Puzzled? They're Lid Panels



The pattern at left is a photo taken at the Punxsutawney plant in Pennsylvania where row upon row of lid panels await assembly into the firm's line of stainless steel and aluminum coolers.

Ledbetter Is Conditioner Agent for Fedders-Quigan

DALLAS, Tex.—Appointment of W. L. Ledbetter of Dallas as regional manager of the Unit Air Conditioner Division of the Fedders-Quigan Corp., is announced by E. A. Bonneville, sales manager.

As a background for extending the distribution of Fedders ½ and ¾-ton room air conditioners, Ledbetter has had several years experience in merchandising electric refrigeration and air conditioning equipment.



W. L. Ledbetter

New Electrode Welds Cast Cylinder Heads

WHITE PLAINS, N. Y.—Recommended for the repair of cylinder heads because of the low amperage requirements and ductility, a new welding electrode for cast iron has been introduced by All-State Welding Alloys Co., Inc. here.

The electrode has a nickel core and welds at amperages in the 45 to 140 range. Freedom from spatter, free machinability, and perfect color match are among the features claimed.

Known as All-State No. 4 Fully Machinable Cast Iron Electrode, it can be used on either a.c. d.c. current and is available in diameters of 3/32, 1/8, or 5/32 in.

Recently Opened International Harvester Testing Kitchens, Laboratories Utilize Latest-Design Equipment and Layout

EVANSVILLE, Ind.—The "new look" in American kitchens is deftly combined with food research efficiency in the Irma Harding home economics laboratories, a department of International Harvester's refrigeration division, newly opened at the company's refrigeration plant located here.

Employed is a complete staff of trained home economists, engaged in equipment testing and food preparation.

The new kitchen has personality . . . with color, appointments, and equipment that make it the "dream come true" of every woman who sees it. Color specifications and accessories were carefully worked out by Faber Birren, nationally recognized color authority. The color scheme is of restful pastels; curtains are grey; the floor is easy-on-the-feet inlaid linoleum with a striking striped design.

Incandescent lighting in the ceiling and fluorescent lighting under the



cabinets assure ideal light without harsh glare. The fresh, green look of the window boxes and plants adds an atmosphere that makes it hard

to realize that this kitchen is a laboratory . . . and not the ultra-convenient kitchen of a modern American home.

Trio Sets Up West Coast Firm To Produce, Sell Appliances

LOS ANGELES—Arnell of California, Inc. has been formed in Los Angeles County, with 700 shares of no par value capital stock, to engage in the manufacturing and sales of electrical appliances and devices. Principals are: Arnold Fuchs, Peggy Fuchs, and Stanley L. Goodman, all of Los Angeles.

McQuay Represented In St. Louis Area by Davis

MINNEAPOLIS—McQuay, Inc., manufacturer of refrigeration and air conditioning equipment, has named Russell E. Davis of St. Louis as its representative for the St. Louis territory. This consists of eastern Missouri, western Illinois, and most of Iowa.

Davis has been engaged in refrigeration sales and research work since 1933, when he started the Service Engineering Co. in St. Louis. From 1937 to 1946 he was with the Hussmann-Ligonier Co. in St. Louis.

He was born in St. Louis and attended Washington university there.

G-E Air Conditioning Names Leegard Engineer

BLOOMFIELD, N. J.—C. W. Leegard has been named to fill the newly created post of commercial engineer, Refrigeration Machine Division, reports L. H. Matthes, manager of marketing for General Electric Air Conditioning Department.

"In conformity with the policy of decentralization, and to further fulfill the need for closer cooperation among marketing, engineering, and manufacturing responsibilities, the position of commercial engineer is established in the products division," the announcement stated.

A graduate of the University of Minnesota, Leegard joined G-E in 1929 at Fort Wayne, Ind., as a test engineer. He was made design engineer in 1934, and was appointed section engineer in charge of all compressor and condensing unit designs in 1940. In 1946 he was named executive engineer at the Fort Wayne plant, and in 1947 he became plant engineer.

Owens-Corning Makes Lighter Fiberglas for Low-Temp Application

LANCASTER, Pa.—A new lightweight Fiberglas insulation for use in home refrigerators, truck and trailer bodies, and other low-temperature equipment is now being marketed by the Building Materials Division of the Armstrong Cork Co. The new material, called XB-PF Fiberglas, will be manufactured by the Owens-Corning Fiberglas Corp.

XB-PF Fiberglas, which is the lightest-weight Fiberglas insulation available, is resilient, odorless, non-corrosive, fireproof, sterile, and chemically stable. It will be available in standard rolls 54 in. wide, in ½ in. and 1 in. thicknesses. The ½ in. thickness is furnished in 50 ft. long rolls, and the 1 in. thickness in 25 ft. long rolls.

XB-PF Fiberglas insulation is available in two densities: ½ pound per cubic foot and 1 pound per cubic foot. The thermal conductivity of the ½ pound material is .25 B.t.u. per square foot per hour per inch thickness at a mean temperature of 75°. The thermal conductivity of the 1 pound density under the same conditions is .22 B.t.u.

Instrument School Leases Building for Expansion

PHILADELPHIA—Student capacity, space, and equipment facilities at the Brown School of Instrumentation in Philadelphia has been doubled through the leasing of new and larger quarters consisting of a four-story building. The school now in its fourteenth year, is conducted for training both customer and Brown Instrument Co. service and maintenance engineers.

The new quarters will permit expansion of the school faculty under the direction of M. L. Ladden, according to L. M. Morley, vice president of Minneapolis-Honeywell Regulator Co. and its Brown division. It will also permit, he added, a reduction in the large backlog of applications from Brown customers who wish to provide their instrument engineers with additional technical and practical knowledge of industrial instrument operation and maintenance.

The school will extend its courses in processing control and will add classes for the teaching of specialized subjects. Free tuition is provided for customer students.

Dorsey Adds 'LT' and 'HT' Reefer Models to Trailer Line

ELBA, Ala.—Dorsey Trailers has added models "LT" and "HT" refrigerated truck bodies to its line, of trailer equipment, supplementing the popular Z-RO transport.

The LT provides temperatures of 0° F. and above for frozen foods while the HT provides temperatures of 30° F. and above for meat, fish, and other perishables.

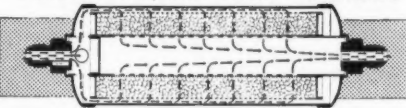
These new Dorsey models are equipped with electric motor driven condensing units with controls, cold holdover plates for protection.

AN ADVANCED COURSE

In Refrigeration, Air Conditioning and Heating. Now taking enrollments for April 6, June 8 and September 7 classes. Write for booklet.

DETROIT AIR
CONDITIONING INSTITUTE
4125 GRAND RIVER
DETROIT 8, MICHIGAN

REMCO HEAVY-DUTY "CROSS-FLO" DRIER-FILTERS AND FILTERS

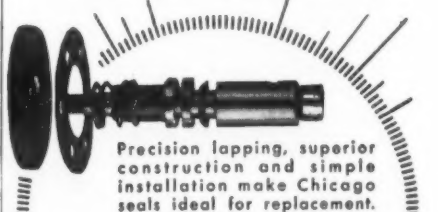


UNIQUE "CROSS-FLO" DESIGN eliminates rolling, dusting and packing of drying agent, which eliminates pressure drop, clogging, poor refrigerant control performance and expensive call backs—permits installation in liquid line, suction line or between refrigerant control and evaporator.

Ask Your Wholesaler Or Write
REMCO, INC., ZELIENOPLE, PA.

PLAYSAFE

USE
CHICAGO SEALS
and
VALVE PLATES



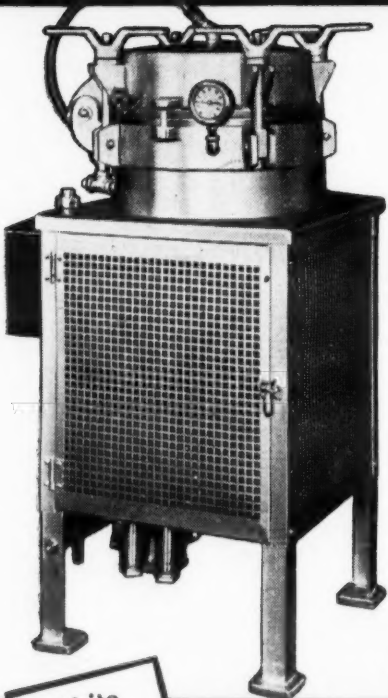
Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.



Only Chicago valve plates have replaceable seats.
PERFECT BALANCE
CHICAGO SEAL CO.
30 NORTH WABLER DRIVE - CHICAGO 4, ILL.

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For Complete Removal of Solids, Moisture and Gases From New and Used Lubricating and Sealing Oils.



- For Vacuum Pumps
- For Absolute Low Pressures
- For Refrigeration Unit Charging

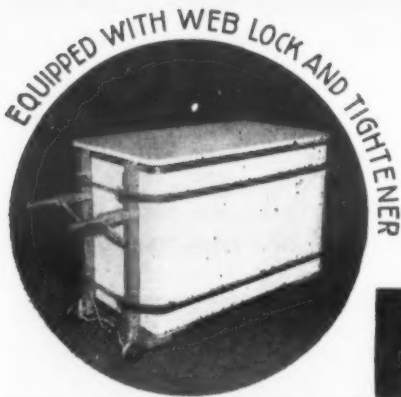
Save
Money — Oil — Equipment

Complete HILCO Vacuum Pump Lube and Sealing Oil Continuous Purifying System Plans available.

Let us show you how to deliver pure oil to refrigeration units with a HILCO charging system.

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Solve Your Problem with the New ROLL-OR-KARI Dual Trucks

Patented Step-On-Lift • Folding Handles
Capacity 1000 Lbs. • Shipping Weight 40 Lbs.
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MANUFACTURERS
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Refrigeration - Air Conditioning - Heating - Parts and Supplies
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THE SUPPLY HOUSE THAT SERVICE BUILT.
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WHOLESALE ONLY

Request for latest Catalog on your "letterhead"

No catalog will be released without proper identification.

WANTED: SALES AGENTS

Who have established distributor contacts in their territory to represent a nationally known draught and beverage cooler line. The products have a long standing reputation for quality and mechanical performance with exclusive features that assure excellent remuneration.

Address Box 2743

Air Conditioning & Refrigeration News

10-Compartment Reach-In for a Restaurant



Door latch arrangement on this 10-compartment reach-in refrigerator installed in Joe Garavelli's restaurant in St. Louis is such that either side of the compartment may be opened individually—a factor which leads to important savings when chefs are preparing foods to serve as many as 2,000 persons per day.

Special Door-Opening Arrangement Cuts Refrigeration Cost for Big Restaurant

ST. LOUIS — A 10-compartment, all stainless steel, reach-in refrigerator, plays an outstanding part in the \$50,000 food service kitchen which has been a postwar project of Joe Garavelli's, Inc., well-known St. Louis restaurant.

The huge refrigerator is located in the center of the "salad workcenter" department, which also includes a 10-compartment soda fountain, a refrigerated Dole-plate Bain Marie for cold salad ingredients, a small steam-table for hot sandwiches, and stainless steel refrigerated compartments for cold salad dishes.

The huge refrigerator, which consolidates all sandwich and salad preparation ingredients into a single point, is completely covered with stainless steel, and its 10 compartments are all equipped with double doors, hinged in the center, which makes it possible to fully open up the compartments, or only open up one-half at one side or the other, if necessary. This saves a great deal of refrigeration loss, according to August Sabadell, proprietor.

"When kitchen employees are rushed, and need only a single ingredient, they only open up the door which covers one-half of the necessary compartment," he pointed out. "This cuts down substantially on condensing unit operation and also eliminates a lot of wasted effort."

Temperatures vary sharply between the refrigerated compartments. One for seafoods is kept at 20° F., to give a crisp, crackly taste to shrimp, clams, oysters, etc., used in chilled seafood cocktails. Others for meats,

mixed dressings, etc., operate from 35 to 45° F., while temperatures go as high as 50° F. with a humidifier added for lettuce, celery, and other salad ingredients.

A similar idea in eliminating "temperature leaks" from too-frequent opening was used in three walk-in refrigerators, cooled with Marlo equipment on the opposite side of the kitchen. One large walk-in refrigerator is equipped with stainless steel shelving at the front to the left side of the door, which may also be reached by three reach-in doors.

Thus, when cooks in this part of the kitchen require only one item, it is not necessary to open the heavy door, losing a lot of the cold air in the meanwhile. Instead, chefs may merely reach through the door, select what they want, and close it quickly with a minimum of effort, steps, and wasted time.

Allen-Bradley Takes New Detroit Quarters

DETROIT—New and larger quarters have been acquired for the Detroit office of Allen-Bradley Co., manufacturer of electric motor controls.

J. D. Petersen, district manager, assisted by J. B. Mason, George Master, and A. W. Wiest, Jr., are now located at 11100 East Warren Ave., Detroit. Better parking facilities and a larger stock of controls are now available to customers in the Detroit area.

\$25,000 In 'Treasure' For Ebco Salesmen

COLUMBUS, Ohio—A cooperative \$25,000 "treasure hunt" by The Ebco Mfg. Co. here and its nationwide corps of distributors' salesmen of both Oasis and Kelvinator electric drinking water coolers has been launched as part of the company's aggressive sales promotion program.

The "treasure hunt," which assures valuable merchandise prizes to all salesmen who really hustle, began Feb. 16, and will continue through May 29. Prizes will be merchandise of the salesmen's own choosing, awarded upon a point basis for sales.

A. R. Benua, president of Ebco, said the firm expects to distribute approximately \$25,000 in merchandise prizes to distributors' salesmen during the three-month "treasure hunt."

Western Locker Meeting In Seattle April 18-20

SEATTLE, Wash.—The 1948 Western States Locker Convention has been expanded from a two-day to a three-day convention, to be held April 18-19-20 in Seattle.

A full program of events made the change necessary, in order to give locker operators an opportunity to attend all of the meetings and clinics. The assembly hall and exhibits will be located in the Masonic Temple.

Luncheons are scheduled for both April 19 and 20—with a cocktail party and banquet at the Olympic hotel, Monday night. A dinner meeting for association secretaries of 10 western states will be Sunday night.

Quicfrez TRIZONE

NORMAL REFRIG. TEMP. **FAST FREEZE**

SANITARY'S PREWAR COMBINATION Farm Freezer is again available for immediate shipment..... Suggested consumer price only \$399.50.....

MODEL NO. C-1148

4½ cu.ft. of 35-50° F. Refrigeration combined with 6¼ cu.ft. of zero frozen storage.
Size: 48½" w. x 28" d. x 40¾" h.
Frozen meat capacity—250-300 lbs.
¼ H.P. hermetic, quiet-type condensing unit
60 cycle 115 volts A.C.

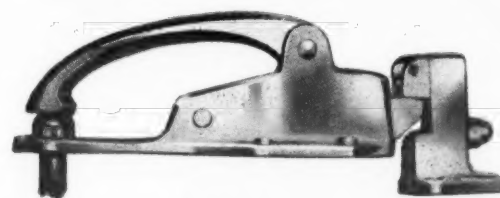
FROZEN STORAGE

SANITARY REFRIGERATOR CO. FOND DU LAC, WIS.
ICE REFRIGERATORS FOR MORE THAN 40 YEARS FARM FREEZERS SINCE 1939

Open up!

...TO THOROUGH SATISFACTION

Two heavy duty veterans

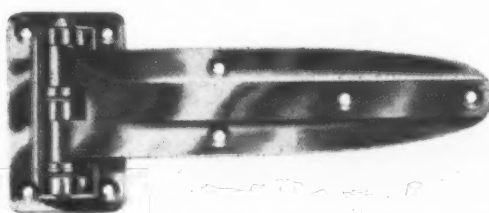


UNIVERSAL COOLER LOCK No. Z-325

CAST BRONZE

FINISH—NICKEL OR CHROME

WEIGHT—11 POUNDS



DOUBLE BALL BEARING HINGE No. 1012

CAST BRONZE

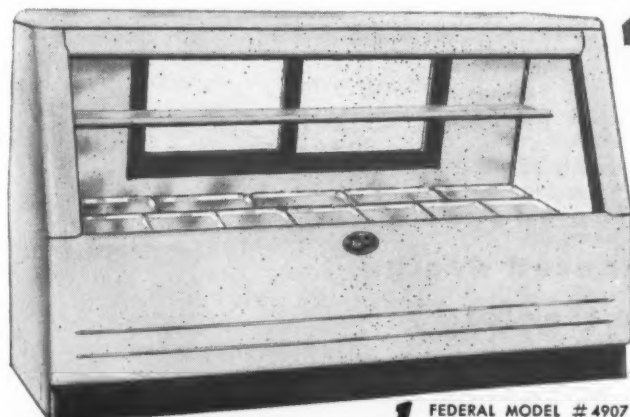
12 INCH BLADE

FINISH—NICKEL OR CHROME

WEIGHT—7 POUNDS PER PAIR

A full range of sizes for all needs.

These husky, well balanced units are the kind of hardware you can forget about—knowing that they will do their job quietly and efficiently.



A NEW SALES FIELD!

The ideal case for the small store... Also an auxiliary case for the super market.

THE NEW Federal "FOOD ECONOMIZER" SEVEN FOOT Self-Contained DOUBLE DUTY

SENATIONALLY LOW PRICED

SAME HIGH QUALITY... AS ALL FEDERAL CASES

FEATURES THAT SATISFY!

- Genuine Porcelain Exterior
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- Air Conditioned "Filter-Kold" System
- Husky ½ H.P. Air Cooled Compressor

THIS IS THE BIGGEST MONEY MAKER IN THE REFRIGERATION FIELD AND A FORWARD STEP TO HELP THE "LOWER PRICE" MOVEMENT

MERCHANDISE WITH FEDERAL PRODUCTS

For: Dairy Products... Produce... Delicatessen... Bakery... Frozen Foods... Meats, Etc. Service or Self-Serve

Some desirable territories available on this new model and our complete line. Write for details.

Federal REFRIGERATOR MFG. CO.
COMMERCIAL REFRIGERATORS ★ WAUKESHA, WIS.

ARCADE

MANUFACTURING DIVISION
ROCKWELL MANUFACTURING COMPANY
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Write for catalog of the complete Arcade line

This concerns Cold Cash for you!

You know that there are a lot of liquor dealers in the retailing and dispensing outlets of the U. S., Alaska, and Hawaii.

Do you realize that —

More of these business men read, depend upon, and act on the advertising they see in LIQUOR STORE AND DISPENSER than in any other publication in the industry?

Last year, LIQUOR STORE AND DISPENSER reached 52,529 of these leading dealers (CCA figures). Nobody else touches that total circulation.

These dealers use a great deal of refrigeration equipment. They are constantly buying new, or replacing old. Their business demands it.

They use LIQUOR STORE AND DISPENSER to make their business grow. Every issue gives them money-making ideas. They stock their places with products LIQUOR STORE AND DISPENSER tells them about.

This market is a big market for you. Are you giving it the cold shoulder by not advertising to these dealers — and selling them?

Use LIQUOR STORE AND DISPENSER, the most important single influence in the liquor business. It will do a big job with amazing economy. Use it now!

LIQUOR STORE AND DISPENSER A CONOVER-MAST PUBLICATION

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ANSUL Technical Service

Since 1915, the name ANSUL has become well known in the refrigeration field, not only as a producer of high grade refrigerants but, also, as a reliable source of authentic, up-to-the-minute technical information.

Over this span of years ANSUL RESEARCH has accumulated volumes of data and made extensive studies in many phases of refrigeration, especially those associated with the chemical aspects of refrigerants, oils, etc. This has resulted in the compilation of an ANSUL library of technical knowledge invaluable in the solution of refrigeration problems.

ANSUL Technical Service is available to Refrigeration Engineers everywhere through ANSUL'S universal wholesale organization. Your ANSUL wholesaler welcomes you to make full use of it without cost or obligation.

Take your refrigeration problems which arise from time to time in the operation of refrigeration systems to your ANSUL wholesaler. He probably has the ANSUL technical bulletin which will give you the answers to your questions. If not, he will be glad to get the information for you from ANSUL RESEARCH. He wants to make your job easier and more profitable.

ANSUL REFRIGERANTS—SULFUR DIOXIDE, METHYL CHLORIDE, KINETIC'S "FREONS," AND METHYLENE CHLORIDE—ARE AVAILABLE AT LEADING ANSUL WHOLESALERS EVERYWHERE.

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ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"

Buffalo Forge Co. Reports Net Profit of \$2,628,199 For Year Ending Nov. 30

BUFFALO—The Buffalo Forge Co. and subsidiaries reported net profit of \$2,628,199 for the year ended last Nov. 30, compared with \$1,155,887 in the preceding year.

The 1947 profit was equal to approximately \$8 a share on the 324,786 outstanding shares of common stock. For the year ended Nov. 30, 1946, net income was equal to \$3.55 a share.

Net sales for the year amounted to \$19,810,448, compared with \$15,806,248 in the preceding year.

"Demand for our products continued at a high level," said Chairman Henry W. Wendt and President Edgar F. Wendt, in a letter to stockholders accompanying the annual report.

A substantial portion of the increase in sales, the letter said, "was attributable to shipments to foreign customers, which were discontinued during the war and the period immediately following."

Du Pont Gives Holladay Sales Development Post

WILMINGTON, Del.—L. P. Holladay III has been appointed manager of sales development in the Chlorine Products Division of the Du Pont Co.'s Electrochemicals Department.

Holladay, who started with the company in 1934 as a chemist in the analytical laboratory of the Philadelphia plant of the Grasselli Chemicals Department, will be concerned with sales of perchloroethylene, trichloroethylene, methyl chloride, methylene chloride, and chloroform.

He received his degrees of chemical engineer and bachelor of science from the Massachusetts Institute of Technology in 1934, joining Du Pont the same year. After a year in Philadelphia, he was transferred to the Industrial Engineering Division.

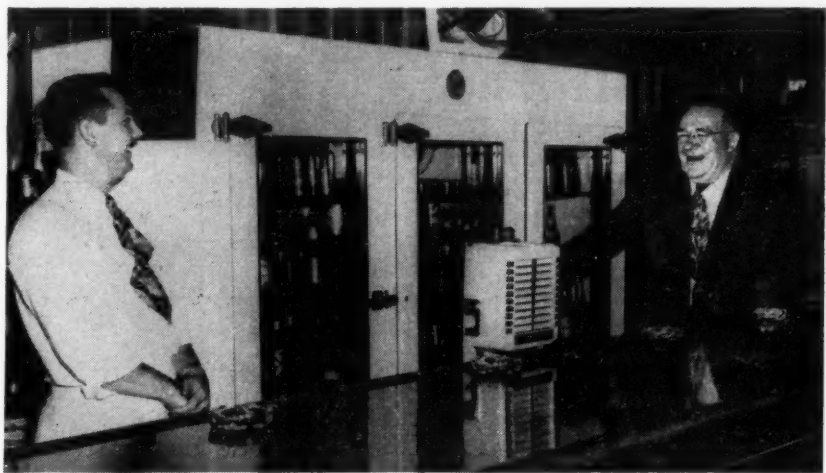
In 1941 he became a development engineer in the Electrochemicals Department and in 1944, a technical development investigator, from which position he was promoted to his present post.

Marshall Electric Moves Out of Downtown Lincoln

LINCOLN, Neb.—Marshall Electric Co. here, headed by M. P. (Curly) Marshall, has moved from its downtown location to 3859 South St. In the new building, especially designed for the company, will be an electrical shop and an appliance store.

Front of the building with a plate glass window will be devoted to the showroom and offices, while the rear portion will house the shop and repair facilities as well as stockrooms. The building is air conditioned and equipped with fluorescent lighting.

'New Look' In Beverage Coolers



Bill the "Eagle" (right), who operates a tavern at 16384 Fourteenth St. in Ashland, Calif., enjoys immensely dipping into his 47-cu. ft. Perfecold reach-in refrigerator for a cold bottle of beer. His customers seem to like the "New Look" in beer coolers, too, for Bill reports that sales have zoomed since he installed the unit. With the refrigerator directly behind the bar, Bill's bartender (left) finds it mighty handy.

Ebco Appoints Peerless Indianapolis Distributor

COLUMBUS, Ohio—A. R. Benua, president of The Ebco Mfg. Co., announces that the Peerless Electric Supply Co., Indianapolis, is now a distributor for the Oasis line of electric drinking water coolers in the Indianapolis territory.

Peerless Supply is a firm with 20 years' experience in the distribution of refrigeration equipment and electrical supplies. H. E. Rasmussen is president; Paul H. Keller, secretary-treasurer; Robert C. Price, vice president; and W. A. Shafer, sales manager.

Dollar Volumes Up, But Retailers Fear Rail Rate Rise

NEW YORK CITY—Members of the retail organizations making up the Central Council of National Retail Associations registered gains in dollar volume of from 5 to 10% during January and February, but they are pessimistic about the chances of holding the gains.

This consensus was indicated in reports presented at the Council's recent annual meeting at the Pennsylvania hotel here.

What effect the proposed transportation rate increases now before the Interstate Commerce Commission will have on prices to the consumer was the main topic of discussion. It was decided that each association will make its own study of the proposed increases, with results to be presented to the ICC and group members.

Bent Occupies New Quarters

JACKSONVILLE, Fla.—Bent Distributing Co., Philco distributor here, has recently moved to 4012 W. Beaver St., according to a company announcement.

60 New M-H Instruments, Controls Introduced In '47

MINNEAPOLIS—More than 60 new instruments and control systems were announced by the Minneapolis-Honeywell Regulator Co. during 1947, Harold W. Sweatt, president, told stockholders in the recently issued annual report.

Net sales established a new peacetime record and totaled \$60,596,021, compared with \$45,940,081 in 1946.

The increase of about 30% in sales, which was general throughout major company divisions, resulted in an approximately equal percentage increase in net earnings, Sweatt said.

Slightly more than half of the company's total sales during the year were made up of products newly designed or re-designed since 1939, the report states. Today Minneapolis-Honeywell spends nearly as much for research and engineering as the company's entire net income 10 years ago.

Chase Refrigeration Names Picker, Rogers to Sales Staff

CHICAGO—Chase Refrigeration Supply Co., refrigeration supplies and equipment wholesaler, announces appointment of Carl Picker and C. L. Rogers to its sales staff.

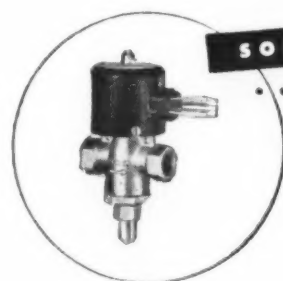
Picker, formerly Chicago district sales manager of Mills Industries, will represent the company in Chicago and northern Illinois.

Rogers formerly owned and operated a refrigeration service company in central Illinois, and will represent Chase Refrigeration Supply in central and southern Illinois.

Other members of the sales staff are Robert B. Mitchell, Chicago representative, and J. P. Glass, director of sales. Glass announced that another new catalog will be offered to the trade during the spring.

T

twenty-five years of close association
with the refrigeration industry is
reflected in the advanced design
and proved construction of
Henry Products...



SOLENOID VALVES

Capacity range 1 to 20 tons Freon and 10 tons Ammonia. Most models have come-apart construction. Metal-to-metal and soft neoprene valve seats. Freon valve connections: 3/8" to 1/2" solder and 3/8" to 1/2" F.P.T. Ammonia 3/8" and 1/2" F.P.T. flanged connections.

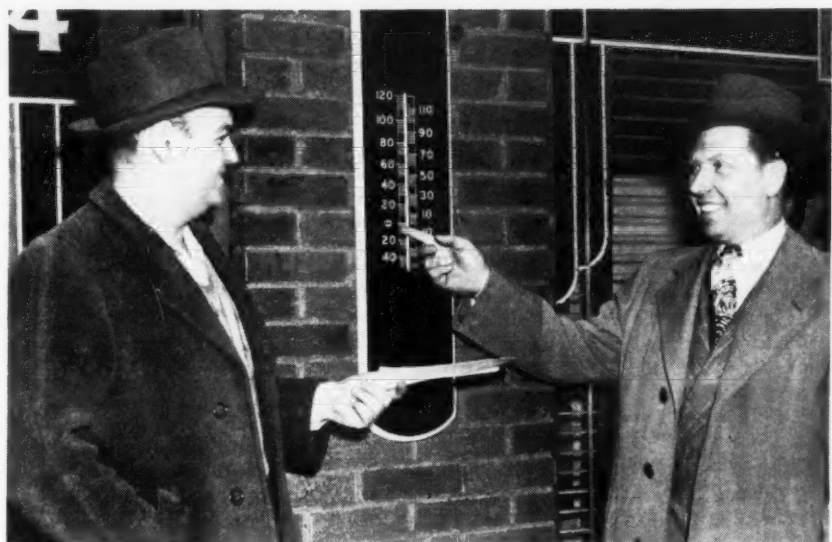
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HENRY VALVE COMPANY

Control Devices, Valves, Driers, Strainers and Accessories for Refrigeration and Air Conditioning and Industrial Applications.

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Air Conditioning Sales In 0° Weather



The weather outside was cold (0° F. to be specific) as Clifford Biggs, sales manager for Tobinka Hardware Co., St. Louis, and William Jost, a tavern owner, gathered around the thermometer outside on the day of closing a sale for two 5-ton Frigidaire package store conditioners for Jost's tavern. Biggs feels that by making air conditioning sales a year-round activity each customer receives more attention and the result is a better job.

OHI Booklet Answers Consumers' Questions

NEW YORK CITY—The oil burning public which has been confused by reports on the fuel oil supply situation is to get some answers in "ANSWERS—your questions about BURNING OILS," an information booklet prepared by Oil-Heat Institute of America, Inc.

OHI has assembled in question and answer form, the facts that apply, beginning with crude reserves and tracing through to the delivery of refined product to users.

"ANSWERS" quotes only from industry and government sources generally recognized as reliable," declares A. E. Hess, OHI managing director. "These same facts and figures which add up to an adequate future crude supply, improving refinery output and increasing transport facilities have always been available to all concerned."

Copies of the booklet will be furnished in lots of more than 100 at cost—2½ to 3½ cents each depending on quantity ordered—to anyone who desires copies for distribution to the public. A sample booklet and order form can be secured from OHI headquarters, 6 East 39th St., New York.

Chatten Manages Philco Capitol Sales Division

PHILADELPHIA — Alfred H. Chatten, who has a background of 19 years of sales experience with Philco, has been appointed manager of the company's Capitol Sales Division, with headquarters in Washington, D. C.

Joining Philco in 1930 as a member of the sales force in the company's Chicago wholesale distributing organization, Chatten was later transferred to Milwaukee, and then to Grand Rapids, Mich., as a district sales representative. In 1940, Chatten was promoted to the position of general sales manager of the Detroit and Toledo offices of Philco Distributors, Inc. He entered the Army Signal Corps in 1942, and upon his release, rejoined Philco and became a district sales representative with headquarters at Cleveland.

A. F. Milton Elected Treasurer At Baker Ice Machine Co.

SOUTH WINDHAM, Me. — Albert F. Milton has been elected treasurer of the Baker Ice Machine Co., Inc.

In addition to this new responsibility, Milton will continue to act as chairman of the executive committee of the board of directors and secretary of the company.

He became associated with Baker in 1945 when the company was purchased by the Equity Group of companies. Since then he has combined an active part in its management with his many other business interests which include directorships on the boards of the General Reinsurance Corp. and the North Star Reinsurance Corp.

Gerald Weston Joins Ind. Management Firm

LOS ANGELES—Gerald W. Weston, former executive vice president of the National Association of Refrigeration Contractors, has joined the Biddle Trade Bureau of Los Angeles, one of California's oldest industrial management and consulting firms, with branch offices in San Francisco and San Diego.

Weston's long experience in the electrical, radio, and refrigeration fields will be fitted into an expansion program now under way with the bureau's catalog and pricing services. Weston for 19 years managed the Electric and Radio Association of Kansas City, spent one year with the National Electrical Contractors Association, and two years in Washington, D. C. with the War Production Board where he was in charge of services to 15 different kinds of repair shops throughout the country.

Frigidaire Names Brinkman Factory Sales Director

DAYTON, Ohio—R. C. Brinkman, of the direct factory sales department of Frigidaire, has been appointed railroad sales representative, reports L. McCutcheon, manager of direct factory sales.



R. C. Brinkman

"Frigidaire is preparing for more extensive business in the railroad air conditioning and refrigerating field," McCutcheon explained. "New air conditioning and refrigerating equipment such as the self-contained diesel generating system aboard GM's Train of Tomorrow is a pertinent example." The company is also building air conditioning and refrigerating equipment for standard axle-driven railroad electrical systems.

Brinkman, a veteran with 19 years experience with Frigidaire, served in the sales order and foreign departments before being transferred to the direct factory sales department in 1945.

G-E Names Wotring To Dishwasher Post

BRIDGEPORT, Conn.—Gaylord H. Wotring has been appointed manager of engineering for General Electric dishwashers and storage cabinets, reports C. J. Enderle, manager of the electric sink and cabinet division.

Wotring joined General Electric in 1929 following his graduation from the University of Michigan.

During the war Wotring was designing engineer of the Pioneer Products division, and in 1946 he was appointed engineer of dishwashers.

★ NUMBER NINETEEN ★

Air Conditioning Is Responsible for Penicillin

THE COMPLICATED production of penicillin is dependent in every step upon utter control of temperature and air movement. Without air conditioning there would be no penicillin.

Air conditioning provides and maintains exactly the proper temperature and humidity most favorable to the rapid maturing of the penicillin mold—which is grown in thousands of bottles containing a liquid nutrient into which the mold secretes droplets of the bacteriostatic agent. (This liquid, decanted after a culture period, is then dehydrated by an intricate, highly exacting series of processes which involve freezing and evaporation under high vacuum.)

Inasmuch as penicillin is regarded as one of the most potent developments in medical history since the discovery of the sulfa drugs, it is important to know that air conditioning plays the following essential roles in its production: Maintaining correct temperature and humidity for production of the mold; providing low temperatures which prevent destruction of the drug while in solution; and speeding the dehydration of the solution.

Since production of this disease weapon is relatively new, and since no standard process has yet been adopted, air conditioning installations for penicillin manufacture are usually individually designed. Thus it follows that this market for air conditioning will be a highly profitable one for quite awhile yet.

Although penicillin is an almost miraculous bacteria killer in venereal diseases, osteomyelitis, pneumonia, diphtheria, gas gangrene, and some of the most virulent types of blood poisoning, it should be noted that penicillin itself can be quickly destroyed by some of the common spores in the air.

An entire day's work could be voided in a few fleet minutes should any of the many contaminating organisms present in any air sample find their way into penicillin fermentations. An extensive air conditioning system thus must be installed throughout all parts of penicillin plants in order to eliminate undesirable contaminants.

Here's another public-health contribution which our industry makes:

Air conditioning supplies clean-filtered air—with accurate regulation of both temperatures and humidity—in plants where X-ray film is made, and in hospitals where it is used. And in dental clinics and hospitals, air conditioning units are contributing to better health. Infections attributed to the hazard of sterilized instruments slipping through moist hands—and even operative risks—are reduced by proper temperature-humidity control in the hospital and clinic.

Nor do these citations exhaust the list. More new uses for air conditioning in hospitals are being developed, and in days to come we'll find that air conditioning has turned out to be one of the world's more useful boons to public health. There's no way anybody can gauge the eventual size of this market, or its ramifications. But we can safely say that air conditioning for HEALTH is destined to be one of America's fastest-growing businesses.

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Care In Determining Cost Spells Difference Between Profit and Loss In Service Work

WATERLOO, Iowa—"The service side of the air conditioning and refrigeration business can be equally as profitable as the sales end of the business if it is conducted with the same profit motive."

This assertion was made by Frank Frazee, sales engineer with Westerlin & Campbell Co., in a talk before the recent meeting of the Iowa State Association of the Refrigeration Service Engineers Society here.

"The fact that many dealers and distributors accept losses on the service and installation end of their business is either the result of their failure to develop the operation or their failure to set up a fair set of books."

"Few existing dealers in our industry arrived at complete organizations. Some men started as sales agents and added service as an afterthought. Others grew from service organizations."

Where Service Was Added

"As we are going to develop the picture on service profits, we shall be discussing for the most part, organizations which grow from sales to service rather than from service to sales. It is worth noting that to the service engineer who 'grew' into sales, the problem is how to make sales profitable."

"For the ex-service engineer is inclined to do a good job of pricing service, installation, and warranty costs. He fails frequently to price equipment high enough to justify his sales organization. On the other hand, the sales organization knows the selling business and if possible, would frequently prefer to sell F.O.B. some manufacturer's plant to eliminate the problem of the service department. Both departments should show a profitable picture under proper management and organization."

"The development of a service and installation department must be as independent of the sales department of a dealership as it is in the manufacturing plant in which refrigeration equipment is produced."

"Almost without exception, the vice president of sales and the vice president of production report to the president. Only through this top level association do the two join forces."

30% for Earnings?

"The United States Dept. of Commerce reports that the average air conditioning and refrigeration sales business buys its materials for 55% of the selling price and installation cost 15%, leaving 30% as earnings before overhead."

"If we use a \$100 base and mark the item costing \$55 up 50%, and also mark the \$15 installation cost up 50%, we come out with a selling price of \$82.50 for the merchandise and \$22.50 for the installation or a total selling price of \$105 instead of the \$100 which we started out with. That way both the sales and the service departments feel that the other represents a loss."

"The friction between the two phases of dealer operation goes further on job site erected equipment. The service department feels entitled to make cost of erection estimates and its markups, while the sales department handles the markups of equipment, engineering, and outside purchased labor, such as sub-contracted electricity, plumbing, and other trades. If the job should be lost on price, both departments may feel that the other is at fault."

Problems of Service Dept.

"With this introduction of some of the problems facing a dealership, let us consider only the problems of operating the service end of this business at a profit."

A service and installation department in general must be in complete charge of the following:

1. Receiving department.
2. Inventory of equipment and parts.
3. Trucks and tools.
4. Contract construction.
5. Spot service.
6. Warranty service.
7. Sales training program and service meetings.

"It maintains its card records of service and warranty, receives and executes both service calls and sales

contracts. It reports receipts, expenditures, and billings to the book-keeping department. It furnishes the sales department with cost estimates for installations and with sales leads for equipment that it is not authorized to sell."

"The service manager of a business should hold his position on a par with that of the sales manager. The reasons are obvious when given full consideration. It should be enough that the income from this department justifies this."

"The overhead represented in service exceeds that of sales as most service engineers are salary employees and the sales department works on commission. Hence he not only is the means to a profitable operation but a failure here costs more than a breakdown in the sales organization."

"We are passing through strange times in the service business and the full impact of the changes so recently made have not been fully appreciated."

"A few years ago most refrigeration service engineers working for a dealer drew \$1 an hour. Service was sold by the dealer and independent servicemen at \$2 per hour. For the most part on an annual basis, the one made as much as the other."

Service Costs Up

"Today these rates are considerably higher. This period has marked the growth of organized labor in the field of refrigeration, and in part it is through their efforts that the scale has risen in the industry."

"The average labor cost for service work increased approximately 47% from Jan. 1, 1941, to May 1, 1947. Since last May the increase has been an additional 6% or a total of about 56% since Jan. 1, 1941. The cost of labor today averages \$2.125 an hour throughout the United States."

"A few years ago it was the regular practice for the dealer to mark-up labor 100%, but today management has lost its confidence. In general there appears to be a feeling that \$3.50 is about all the labor market will stand at the selling level, which is only a 65% mark-up on cost."

"When such items as vacations and holidays, non-productive time and current production per man hour is considered, it does not appear to be reasonable that the selling price of labor can be less than an 85% mark-up on cost. The failure of management to sell this cost is the primary reason for service department losses today."

"Price increases in materials as well as labor have affected installation costs. Most suppliers in the past have used a two times net for a list price policy. This was the result of the thinking some 20 years ago, when it was believed that most unitary equipment and parts could be sold

and installed at a 100% mark-up on cost."

"The use of the list price plus labor has become so common that it is fast becoming the practice to quote and publish net prices. This throws a greater burden on the service organization to develop its own costs and markups."

"The service management must lay plans to establish a profitable organization. First it is a matter of its own planning. This plan must then be laid before and receive the cooperation of the mechanics who will execute it."

Training for Improvement

"Training a service organization is a big part of the responsibility of the management. This must be a long range program that is well organized and not a paradise for opportunists. Too many weekly meetings of the service force are conducted without proper planning by the management and it is equally true that too many service employees fail to make the most of the opportunity to direct the policy of their organization through these meetings."

"In developing such meetings, the mechanic must be helped to be a better mechanic, for this is his job by choice. Secondly, he must be assisted to be a better company representative."

"Nearly everything that can be developed in service meetings points to greater income per service engineer to the engineer."

"Service tickets might well be a part of every meeting of the group. These should be well written summaries of the work done, the parts used and the time involved. The man on the job collects for C.O.D. or gets the signature on credit okayed work, but he never leaves the job without the customer's complete understanding of what work has been done and why."

Better Job Pays Off

"The success of service work is customer satisfaction. Most users will be prouder of the \$15 service job that gives them months of service than to have to pay several \$2 and \$3 service bills without getting assurance that the job is going to work. This satisfaction is frequently the result of selling service by the service mechanic."

"He may have installed a control, or a seal, or a belt. If he takes the time to comment on the unit, how he found it and its condition when he finished his work, what he has done and why, it should now be satisfactory and will prevent three-quarters of the call backs that go along with spot service work."

"Actually the sale begins well before the engineer is sent to the job. One service organization figured that

(Concluded on next page)

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810 W. WISCONSIN AVE.
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Markups Should Differ for Installation, Maintenance, and 'Spot' Service Calls

(Concluded from preceding page)

non-productive time on the part of the service engineers increased their labor cost 25% or that their engineers were waiting for calls 25% of the time. This figure is somewhat high and 18% appears to be nearer the common figure.

"At \$2.125 an hour, 2,000 hours a year, an addition of 18% costs a firm \$765 a year per engineer. The company previously mentioned last year took 25% of its idle-time fund and put it into service advertising and cut their over-all loss by 35%, according to their statement. The budget placed their service advertising on a par with their equipment advertising budget.

"While all this company's sales force had been trained to discuss their service department, a further move was to see that in addition to any literature left with the prospective equipment purchaser, they also left a service sticker on existing machines. While this assisted the service department, as an interesting sidelight, they found customers who misplaced the literature and business card, used the service sticker to locate the salesman.

Invoice Padding Evil

"Spot checks made in the course of developing these figures, on the relationship between labor sold on customers' tickets and the parts billed ranged from a factual 82.8% labor and 17.2% material to figures obviously exaggerated by the mechanic. It is conceivable that from time to time, a spot service ticket will run 90% material and only 10% labor.

"When it becomes a regular practice to pad a bill with equipment and attempt to kid the customer into believing that time is gratis, the service organization is failing its duty to itself and to the industry. First to itself, because it cannot fail to lose the respect of the customer for its work. And secondly, that company owes the manufacturer of refrigerating equipment at least the honesty of marking parts up at the same rate it marks up labor.

"It is equally dishonest to pay engineers on the 'split ticket' method. Not only does it lead to the sale of unnecessary materials in an endeavor to pad a bill, but it creates a higher cost to the customer than honest, good business methods warrant.

"Sales are a big factor in conducting a service shop. In a dealership, the sales of the service department should be confined to parts for existing equipment. These include condensing units, low side equipment parts and supplies.

5% on Parts Used In Field

"In general it is a mistake to pay a service engineer for parts used in the field but he should receive compensation for units. In general, the sales department paying a straight 10% commission on these items to salesmen but the serviceman, because he is on an hourly basis, should get at least a 5% commission.

"It is beyond the scope of this discussion to consider at length each of the seven duties of the service department mentioned earlier and its

profit relationship. We have touched on the sale of equipment such as condensing units.

"Invariably, the sale of equipment is accompanied by a guarantee, usually for one year.

"Some organizations set up a service reserve for equipment in warranty, some fail to even include a reserve in the selling price. Almost without exception both pray that the equipment will run for a year without service.

One-Year Inspection

You may be interested in learning of the method used by one firm in handling this matter of warranty. They offer a maintenance and inspection service on equipment as a part of their business. To promote this service they include in the selling price of all equipment they sell, a one-year inspection service.

"Instead of setting up \$25 as a reserve on a condensing unit which they would hope to throw into profit at the end of the guarantee period, they may include \$50 in the selling price for maintenance and expect a 30% profit on the fee included in the selling price.

"Nine inspections are made during the first year the equipment is in operation. The unit is oiled, the control and belts are adjusted, refrigerant is added when necessary, and if the unit has become scratched or soiled, it is wiped and painted. Reports are made to the user after each inspection.

"At the end of the year the customer is asked to inspect the equipment. He is told that it is now his baby and that the service he received during the past year will cost him \$50 a year.

"The profit from this operation presents an attractive picture to any service organization."

1. Warranty is on a fixed, profitable basis.
2. It promotes the sale of further maintenance contracts.

Calls Remind User

3. The frequent calls and reports keeps the service company's name before the user. Nearly all subsequent sales are made without competition.

"Installation of equipment while it precedes the warranty period is the third function of the department. While each of the three functions, spot service, warranty service, and installation require careful planning, the third phase requires the most.

"The dealer expects to make a profit both in the sales and in the service department. Some of the overhead is common to both departments and the erection must be taken by the service department at a lower margin than the rest of their operation. Moreover, they are working against an estimated cost that was a part of the sales contract.

"It is the job of the service manager to see that all equipment, parts and supplies, construction prints and drawings, in fact everything necessary is ready before the first serviceman is dispatched to the job.

"The service manager's position is that of a general of the army committing his men to battle. He has

studied the enemy, the terrain, the reports of reconnaissance, his equipment, supplies, and personnel. He has held staff meetings and briefed the officers. The plan is ready.

"Similar preparation must be made if installations are to be made competitively and at a profit.

"The price structure of the service department must be based on the engineers or the type of work done. There should be a differentiation in rates between seasonal and non-seasonal, desirable and undesirable spot service.

"For example, the first cold snap of fall is marked by an influx of calls to pump down air conditioning systems and switch over to a heating cycle, just as on the first warm day of spring the service shop is deluged by calls to start up the air conditioning systems.

"Accepting these calls may make it necessary to postpone installations and delay service to year-round users of refrigeration. A higher hourly service may be justified for this type of work.

Some Require Higher Rates

"Beverage cooling is a rather specialized service and sales problem and unless this is the business of the dealership it may be undesirable. Most service to beer equipment must be done at once and frequently after normal business hours. And again a higher hourly rate may be justified.

"As a matter of record it would seem that not less than an 85% markup must be taken on spot service work. Warranty or maintenance service should reflect a 50% markup on costs. Installation work should reflect a 30% markup on cost esti-

mates. Both time and material are included in these markups.

"Prior to the War it was believed that the work of the average mechanic doing spot service invoiced at \$6,000 per year. A 50% increase in billing might be gained by using the mechanic on installation or maintenance work as it could be planned and scheduled. Spot service in the past two years with increased costs now reflects a 60% increase or an average billing of \$9,600 per year.

\$2,800 per Serviceman

"Extending these figures we find that a well organized shop should gross approximately \$2,800 per service engineer and net of approximately \$1,000 per engineer.

"These are my figures. They are developed from shops that actually do lose money and those that show substantial profits tempered by my imagination. When a shop does substantially better, it is usually because of a better service and sales job.

"Today's rates are higher than anything the service engineer of the past have ever expected and they are entitled to this compensation. No shop can afford to pay its organized help one rate and its unorganized engineers at a lower rate. Nor can the serviceman expect any respect working under such inequality.

"Within the next few months the service engineers in Chicago will increase their rate to \$2.40 per hour. They receive 25 cents per hour for their cars plus mileage. At \$2.65 it means the shops are going to have to charge \$4.90 per hour for labor. The increase in rates has in the past and will again weed out borderline engineers."

"At this rate the customer expects Lord Kelvin himself to repair their equipment. The customer is justified in expecting a competent engineer who will spend a minimum amount of time on the job and install only those parts essential to re-operating the equipment. The day of the padded service bill is past.

"Making more money from the service business is possible. It is only a matter of steps.

1. Selling the service.
2. Complete customer satisfaction based on knowing what has been done and why.
3. Honest labor charges and honest job tickets.
4. Divorcing service from sales departments.

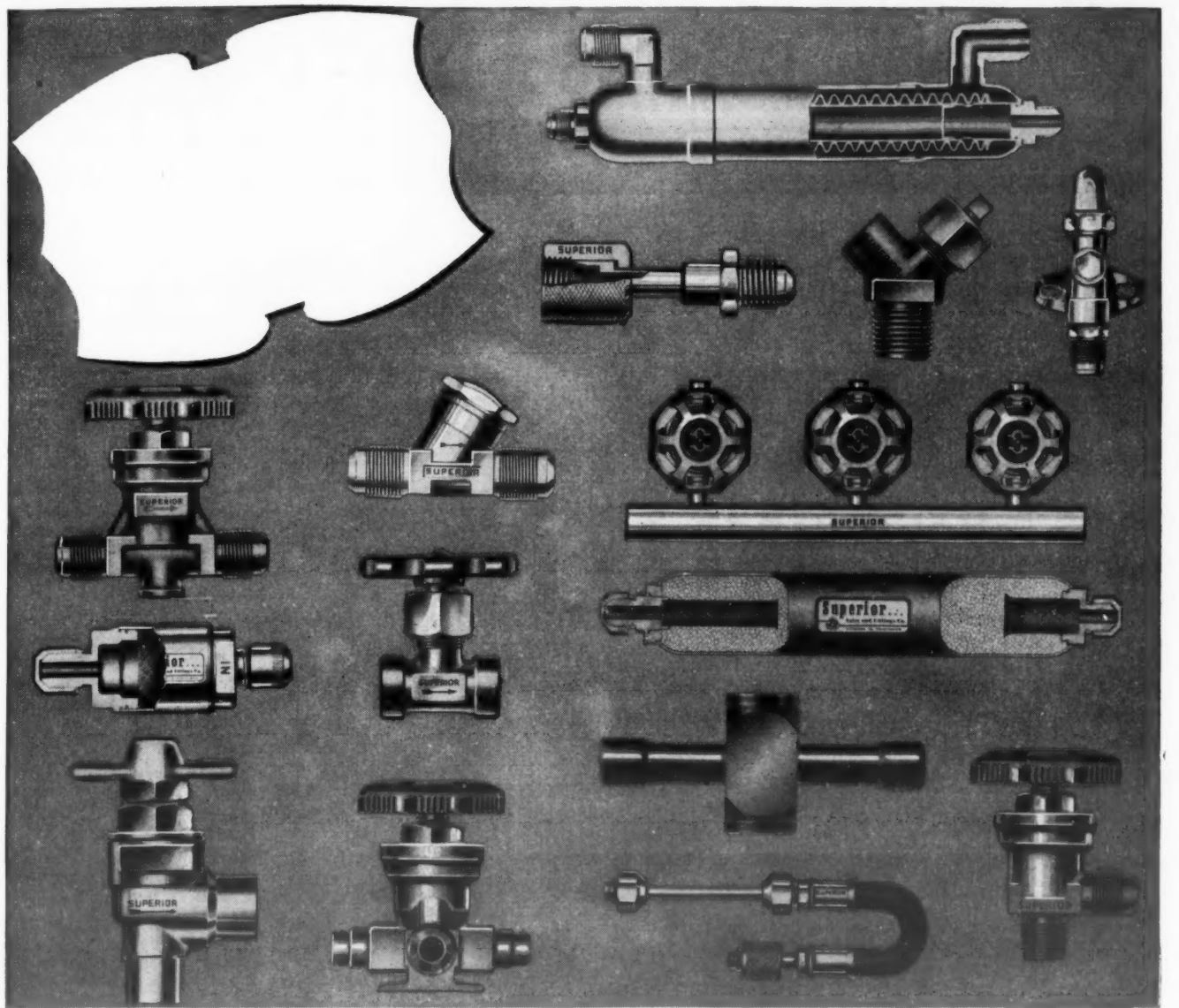
National Groups Can Help

"In conclusion, considerable work should be done by national and local organizations in developing significant figures on the operation of service organizations.

"N.A.R.C. and R.S.E.S. should make an effort to get factual percentage figures on the markups for labor required to cover such items as unapplied and travel time to arrive at a satisfactory gross profit.

"R.E.M.A. and R.E.W.A. can be of considerable assistance to the shops as well as themselves by developing figures on the relationship of parts stocked to dollar volume in many component parts lines.

"Nothing succeeds like success. Typical operating figures on more successful service organizations will assist everyone in this field to make the most out of their service business."



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Refrigeration Problems

And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Cleaning Parts Before Repairing (6)

There can be no fixed time given for treating condensers, pipe, etc., for removal of rust, lime, and other coating that reduce water flow and the rate of heat transfer. It may take as little as 10 or 15 minutes or it may take a couple of hours.

As a rule the circulating method shown in Fig. 5 is much faster because it is constantly bringing the fresh solution over the encrusted surface, whereas, the solution when

simply poured in (the "Static" method), stays in one place and tends to lose its activity there.

The workman will be able to estimate from experience, how long the incrustation must be exposed to and treated by the solution. Until he gains that experience, he should be cautious, and if in doubt, he should use the solution a little weaker, or leave the metals in the solution only a few minutes.

If necessary he can strengthen the solution or put the metal back in it if the metal is not thoroughly cleaned or if undesirable coatings have not been satisfactorily softened or removed.

RINSE ACID OFF THOROUGHLY

After the rust, lime, or other incrustation has been removed or seems to have been sufficiently softened, the metal should be thoroughly rinsed. A good way is to place it in the cleaning booth and hose it well, preferably with the water running over it for 5 or 10 minutes, so that the acid solution is all rinsed off.

Sometimes, especially in the case of rather large water-cooled condensers, it is much easier to treat them with the acid solution out on the job rather than to disconnect them and bring them in to the shop. Either the "Static" method—filling the condenser with the solution and letting it stand for awhile—or the circulating method may be used, although the latter is faster and thus preferable for large or heavily incrustated condensers.

In either case fresh water should be flowed through the condenser for at least 10 minutes, if possible, longer.

In the shop the condenser or other parts being treated, may be placed on the floor of the cleaning booth and hosed and water flowed through or over them.

It is rather difficult to be sure that all of the acid solution has been completely rinsed off. In the case of the water cooled condenser, it will be further rinsed as soon as it is put back into service, but some parts, especially those that are inside the system and exposed to the refrigerant must be completely free of acid.

Out on the job, a strong solution of washing soda in water may be used. It may be put in the condenser or the part immersed in it, for 10 or 15 minutes. The soda is an alkali and thus neutralizes any traces of acid left after the rinse. After the soda solution, a re-rinse should be used.

In the shop, after the rinse, the part may be immersed for a few minutes in the alkali cleaning solution in Tank No. 1 (Oakite No. 24, Wyandotte WLG, etc.) and again hosed as a rinse to remove the alkali solution.

Then the part should be put in the hot water rinse, Tank No. 2, for 5 to 10 minutes. When removed it will be hot and will, therefore, dry quickly after being blown off, with little if any, traces of rust.

The inhibited acid solutions above described for softening or removing rust, scale, lime, or other incrustations, may be safely used on iron, steel, copper and brass surfaces, with little danger of damaging the metal itself.

Very finely finished surfaces such as polished or lapped surfaces on valve plates, seals, etc., may be slightly affected and should be watched carefully. They should, of course, be relapped after treatment.

The white metals, aluminum, zinc, pot-metal, die-castings, etc., will be attacked somewhat by the acid solutions. If it is used, the part should be left in but a very short time and inspected at frequent intervals.

Again, there can be no fixed rules as to how long the part may be left in the solution. Conditions vary so much, such as the thickness of the incrustation, its nature, the strength of the solution, the kind of metal, etc., that the workman must, in many cases, simply watch the prog-

Fig. 5. Pump Forces Solution Through System

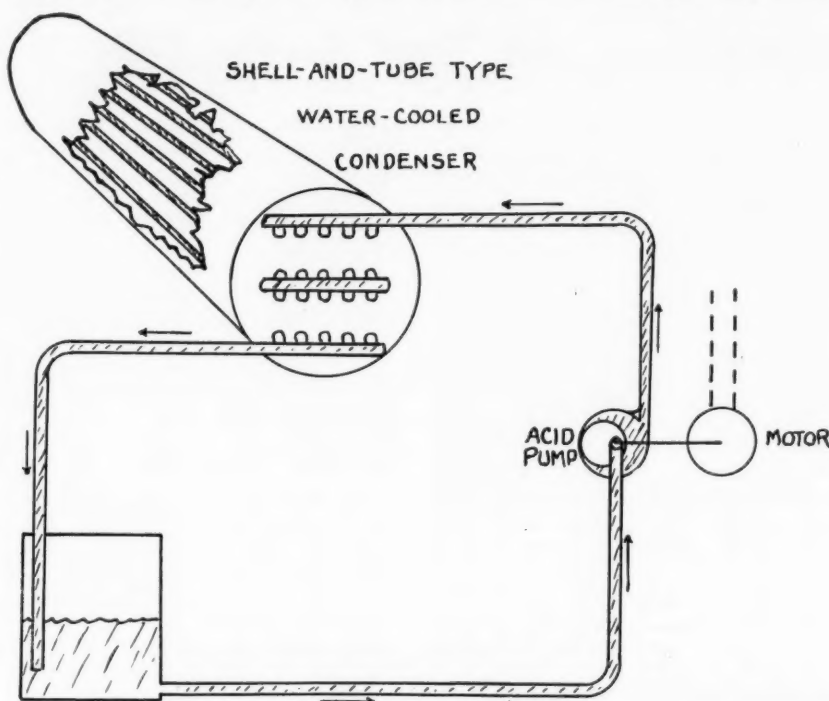


Fig. 5—Circulation of the rust-removing solution by a pump will speed up the time of rust removal. This drawing shows how connections are made for this type of rust-removing process.

ress of the process and be governed accordingly.

TREATMENT BEFORE PAINTING

After the compressor or other assembly has been rebuilt, run in, and tested, it should ordinarily be repainted. During these operations it will probably get a bit oily from handling, etc., or it may be wet from submersion in a leak-test tank.

The outside of the compressor should, therefore, be cleaned and prepared for painting. If oil is left on the surface, the paint or lacquer will not stick. If moisture is left, it may start rusting under the paint and cause the paint to loosen. Impurities may cause corrosion that will react much like rust.

If the shop is equipped with the cleaning booth with Tank No. 1 of hot cleaning solution and Tank No. 2 of hot rinse water, the finished compressor may be put through the hot cleaner for a few minutes, rinsed by the base, immersed a few minutes in the hot water in Tank No. 2 (enough to get the compressor quite warm), removed and blown off with compressed air (or CO₂).

Ordinarily, this should be sufficient for a compressor to take paint easily. However, some other equipment, such as cabinets, blower coils, etc. cannot be put into the cleaning tank. Also, it is usually desirable to put a better finish on this type of equipment than on a compressor.

The oily surface may be cleaned by carbon tetrachloride. Stoddard Solvent will leave a slight film of oil, but it may be used if followed lightly by the more expensive carbon tet.

If carbon tet is used it must be wiped dry and clean at once with a clean cloth, as it tends to leave the surface a bit corroded.

A number of chemical companies provide water solutions to use on metal surfaces before painting. They are designed to act as rust inhibitors (to prevent formation of rust under the paint) and to etch the metal surface so that the paint adheres tightly.

One of these, Deoxidine No. 624 of the American Chemical Paint Co., is used with two or three parts of water to scrub external surfaces, such as refrigerator cabinets, for removing rust and other corrosions before painting.

The subject of metal cleaning and treatment is much too broad to be fully covered in a short series of articles such as these, but the inten-

tion has been to point out some simple and inexpensive methods that are applicable to the small or moderate size refrigeration repair shop.

(The author is indebted to the following individuals and companies for information and factual material in the preparation of this series of articles on cleaning parts or other refrigeration equipment):

American Chemical Paint Co.
R. F. McGuire and S. H. Bevins,
Donald Sales & Mfg. Co.
A. H. Bond, Oakite Products, Inc.
R. H. Rosendale, Standard Oil Co.
D. E. Pedginse, Wadhams Div.,
Socony Vacuum Oil Co.
R. J. Racine, Wyandotte Chemicals Corp.

Kelnard Will Service 2 Lines

NEW YORK CITY—Kelnard Sales & Service, Inc. has recently been appointed factory authorized service agent for International Harvester refrigerators and freezers by Bruno-New York, Inc., local distributor.

At the same time T. C. Lindsay, general manager of the Kelnard firm, reported that his company had also been appointed factory authorized service representative for Admiral home appliances.

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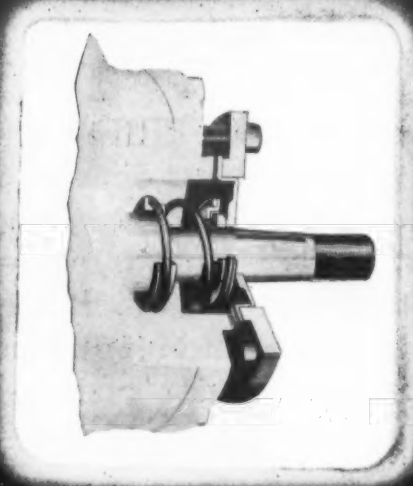
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Report on Brazil:

Nation's Drive To Expand Industrialization Seen Upping Demand for U. S. Equipment

By Harry D. Friedman, American Refrigeration Export Co.

Editor's Note: This is the eighth and concluding field report in a series analyzing the Latin American market for refrigeration and air conditioning equipment. The first portion of the series was written by Mr. Friedman's partner, Philip H. Berritt.

All important refrigeration manufacturers are represented in Sao Paulo and Rio de Janeiro, Brazil, through distributors and agents, and in some cases by both. In many cases, the same firms have offices in both cities, with agents and sub-agents in the interior.

Sao Paulo is known as the Chicago or Pittsburgh of South America, and it really is—not only industrially, but also in appearance, even more so than Buenos Aires. It is a city of approximately 2,000,000 people and is, without a doubt, one of the most industrialized cities in the western hemisphere.

There is a saying in that city that is very popular: "Sao Paulo is the locomotive and the other cities in Brazil are the empty freight cars."

At the time of my visit, Sao Paulo was enjoying a building boom such as had never been seen anywhere in Latin America. Not only were private homes and apartment buildings springing up wherever one went, but also office buildings—some 20 and 30 stories high—all over the city.

The population is increasing by leaps and bounds. Many people were of the opinion that it will be the largest city in Latin America within the next 20 years.

The demand for refrigeration

equipment there was great and was expected to continue to be so for some time to come.

Of all refrigeration equipment, condensing units have the greatest demand in Sao Paulo. Reach-in boxes, display cases, ice cream cabinets, and other similar equipment are manufactured locally.

I was conducted through some of their factories and saw their equipment in production. I had to admit that it compared very favorably with similar equipment fabricated in the United States. The same is also true of locally-made refrigeration hardware.

Equipment manufactured in Brazil is insulated with cork imported from Spain and Portugal. Most of the manufacturers prefer it to impregnated glass wool, such as we use.

Although Sao Paulo is close to Rio de Janeiro, it is definitely not in a tropical climate. During their winter season, it sometimes becomes very cold.

Because of the distinct changes in climatic conditions, there is a definite season for refrigeration equipment. I was told that in the winter, people who own such equipment—both household and commercial—pull the plug out of the wall because they feel that refrigeration should only be

used in the summer. A definite need for education in the proper use of refrigeration is needed in Brazil, as well as in other Latin American countries.

Rio de Janeiro is about as far from Sao Paulo as Boston is from New York. There are eight or 10 Brazilian airlines that shuttle back and forth daily between these two cities. By train, it is an overnight trip.

Although Rio is only a short distance from Sao Paulo, its climate is definitely tropical. The height of their winter season can be compared with the beginning of our summer.

The demand for refrigeration equipment there was great, but not as great as in Sao Paulo. Perhaps the reason for this was the fact that a great deal of refrigeration equipment was landed in Rio, and when many competitive distributors began to receive the orders they had placed, a small price-cutting war began and equipment was literally dumped on the market.

I also heard of cases where importers refused to pick up their drafts, and some firms tried in every way possible to get out of some commitments they had with manufacturers in the U. S.

Because most of the imports which come into Brazil are landed either in Rio or in Santos (the port for Sao Paulo), the other cities are serviced from Rio and Sao Paulo.

Brazil is trying very hard to become more industrialized, and there was much talk by the government of pushing into the interior which, in many places, is still unexplored.

The government was accepting a large number of displaced persons from Europe. It was felt that these people would not only help increase

Mapping Water Cooler Export Program

Final details of appointment of J. H. Latham firm as exporter of Oasis water coolers are concluded at this conference in Columbus, Ohio, plant of Ebco Mfg. Co. Left to right are C. G. Fosnaught, W. L. Winchester (standing, rear), and Louis P. Benua, all of Ebco; Howard P. Michener, Jr., Latham account executive; Lee H. Love, of Ebco; J. H. Latham; and Sam Finell, of Latham.



the population but would open up many new crafts, which would, of course, lead to new industries.

This was one of the reasons why it was felt business in Brazil should continue to prosper and why there will be an increasing demand, as time goes on, for products manufactured in the U. S., especially heavy equipment. The need for air conditioning and refrigeration equipment will always exist in Brazil because of its climate.

Ebco Appoints Latham Oasis Cooler Exporter

COLUMBUS, Ohio — Selection of the firm of J. H. Latham, New York City, as sole exporter of Oasis electric drinking water coolers was announced recently by A. R. Benua, president of The Ebco Mfg. Co. here.

Howard P. Michener, Jr., of the Latham organization, was named account executive. A graduate electrical engineer of Brooklyn college, he was affiliated with the Testing and Research Division of Underwriters Laboratory during the war.

Michener will be assisted by Sam Finell, a Princeton graduate who recently joined the export firm. He was formerly associated with another export organization.

According to J. H. Latham, general manager of the export company, overseas markets "are demanding the electric drinking water cooler as another step toward better and more modern living."

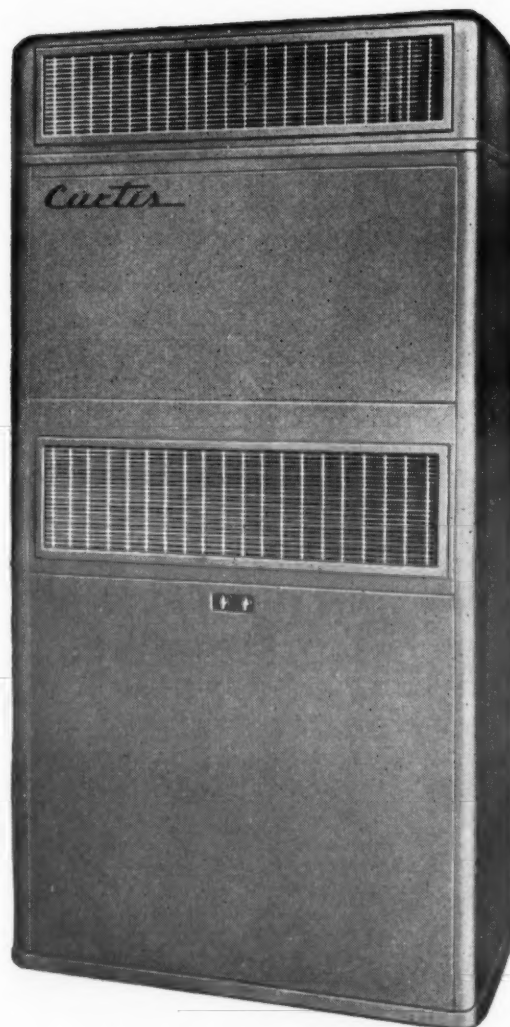
U. S. Refrigerators Dominate Market In South Africa

WASHINGTON, D. C. — Quoting the foreign press, the Office of International Trade, Department of Commerce, said nearly all refrigerators imported into South Africa are of U. S. manufacture.

"South African dealers report that no shipments of refrigerators have been received from Great Britain since the war," OIT stated.

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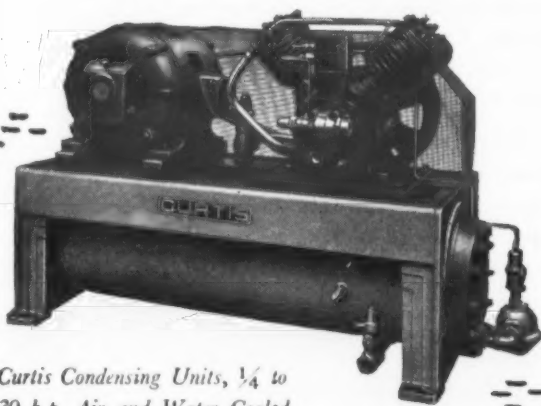


Curtis Packaged Air Conditioner, Capacities 3, 5, 7½, 10 and 15 tons

For commercial refrigeration or air conditioning applications the complete Curtis line offers more to your customers—in satisfactory, trouble-free performance, sound, proven design and engineering and lower operating and maintenance costs. Curtis advantages include:

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6 New Motor Divisions Are Organized by G-E

SCHENECTADY, N. Y.—The organization of six divisions in the small and medium motor divisions of the General Electric Co. has been announced by W. H. Henry, manager of the divisions, which constitute one of the major new businesses recently formed by the G-E Apparatus Department.

The new business has been organized by Henry into six major divisions—administrative, general sales, product sales, product engineering, product manufacturing, and accounting. Eleven are men involved in the organization of the divisions.

D. E. Moorhead was named assistant to the manager of the divisions, assigned to engineering and manufacturing work.

O. F. Vea was appointed assistant to the manager of the divisions, assigned to sales work. He was also named manager of the marketing and promotion division in the general sales divisions.

H. W. Bennett was named manager, gear motor sales divisions.

C. W. Falls was appointed manager, commercial engineering division, general sales divisions.

J. T. Farrell, manager, d.c. motor sales division, product sales divisions. Elliott Harrington, manager, induction motor sales division, product sales divisions.

C. C. Hutton, accountant, Schenectady induction motor accounting division.

M. E. Rexford, manager, standards and pricing division, general sales divisions.

The other men named were L. D. Fowler, manager, Oakland motor sales division, Oakland, Calif.; L. E. Sproul, accountant, Lynn motor accounting division, Lynn, Mass.; and D. A. Yates, manager, Lynn motor sales division, Lynn, Mass.

Complete Air Conditioning Marks New Matson Liner

SAN FRANCISCO—Balmy breezes prevail on the Pacific but the 722 passengers aboard the new Matson passenger liner *Lurline* have the additional luxury of controlling their own room temperature, for the ship is completely air conditioned.

The *Lurline* sails April 15 for Honolulu on her maiden voyage.

On the new liner all passenger staterooms and crew living quarters, all dining saloons, lounges, and other public rooms, as well as the ship's offices, are completely air conditioned.

The passenger staterooms and crew living quarters have manual controls so that both the temperature and the amount of fresh air can be suited to individual requirements.

Among the refinements of the air conditioning system is an auxiliary exhaust ventilating system for drawing smoke-laden air out of the first class smoking room.

In the ship's galleys exhaust ventilating systems draw off the hot air and allow air conditioned air to replace it.

Inner Workings of New Conditioner Shown In Worthington Booklet

HARRISON, N. J.—Prospects for package air conditioning will be able to obtain a quick view of construction details and engineering features in its new line of 3 and 5-hp. package air conditioners by means of a Trans-Vison booklet which has been prepared by Worthington Pump & Machinery Corp. here.

Designed to show the accessibility, attractiveness, efficiency, simplicity, and sturdiness features which Worthington claims for its new conditioners, the booklet contains a series of cutaway photos in color reproduced on transparent cellophane.

Turning the pages of the booklet gives the effect of gradually "tearing down" the conditioner to show its inner workings, while marginal notes and keyed arrows beside the pictures point out the major features.

First page shows the exterior of the conditioner with emphasis on the flexibility of the air discharge section, concealment of controls, cabinet finish, and accessibility to working parts.

Back of the first page shows, among other things, how the panels and doors are insulated.

Next picture has the front panels removed to show controls, filters, and the compressor body, while the reverse side gives more details plus a partial cutaway view of the compressor.

Details of the heating and cooling coils, blower, expansion valve, and compressor construction are featured on the next page, while the back of this picture shows additional details on this items, including a cutaway view of the condenser.

Final picture has many of the components removed to bring out such points as the compressor mounting, and the back of this is a rear view of the complete unit with the panels in place to show how the air inlet may be placed in the rear and the type of installations for which such a change may be desirable.

Commercial Credit's Net Was \$9 Million In 1947

BALTIMORE, Md. — The thirty-sixth annual report of Commercial Credit Co. just issued showed consolidated net income from operations, after providing federal income tax reserves for each company, was \$9,019,937 for 1947, compared with \$4,851,808 for 1946.

After deducting \$1,000,000 as a "reserve for fluctuations in security values" applicable to the portfolios of the "insurance companies" and providing for minority interests, consolidated net income credited to earned surplus was \$7,995,410, or \$3.85 per share on the common stock, for 1947, compared with \$4,862,207, or \$2.15 for 1946.

Gross volume of receivables acquired during 1947 was \$1,486,742,378, compared with \$1,018,586,326 for 1946, an increase of 45.96%.

The KEY to AIR CONDITIONING

by James J. LaSalvia

Sheet Metal Ducts (Cont.)

DUCT INSTALLATION

All ductwork should be installed to eliminate any vibration or noise.

All rectangular ducts should be stiffened by paneling.

The ducts should be fabricated as tight as possible. Ductwork, if properly installed, should have no more than about 5% loss of air through the joints.

Ducts are generally hung from building structure by iron rods or by bar iron hangers.

All volume and splitter dampers should be made of No. 20 gauge sheet metal and should be placed at each junction of branch and main duct, and at all other points necessary to balance the system.

It is customary to use splitter dampers on the rectangular ducts and volume dampers in the round ducts.

All splitter and volume dampers should be provided with adjustable locking quadrants, so that the dampers can be locked in place once set, and these quadrants will also show whether the dampers are fully open or closed or somewhere between fully open and fully closed. (See Fig. 3.)

CANVAS CONNECTIONS

At the inlet and outlet of all fans, a canvas connection should be used

so as not to transmit any vibration from the fan to the ductwork. This canvas should be of the size weighing 12 oz. per sq. ft. and should be made into a trombone, to be sure that it is not a stiff connection. The length of the connection can be from 2 in. on smaller fans and up to 9 in. on the larger fans. (See Fig. 3.)

CASINGS AND ACCESS DOORS

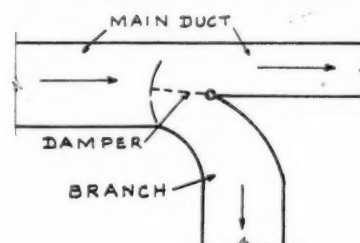
All casings should be made with angle iron corners and stiffeners. All casings should be provided with access doors necessary for easy access to make repairs and adjustments to equipment inside of casings. All holes should be provided for various pipe connections to equipment inside of casings.

The access doors should be no smaller than 18 in. x 18 in. on small casings; and on large casings where walk-in arrangements can be provided inside of casing, access doors should be 20 in. wide and 60 in. high. In all cases the access doors should be constructed of galvanized panels having angle or channel iron frames hinged to similar frames in the casings and should have double latch fastenings.

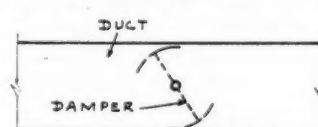
Where access doors are provided for walking into casings, the access doors should have fastenings that can be operated from both sides. (See Fig. 2.)

(To Be Continued)

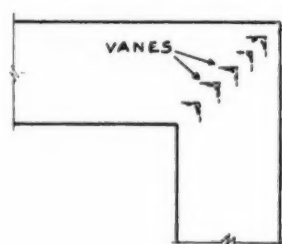
How Dampers Are Employed In Air Conditioning Ducts



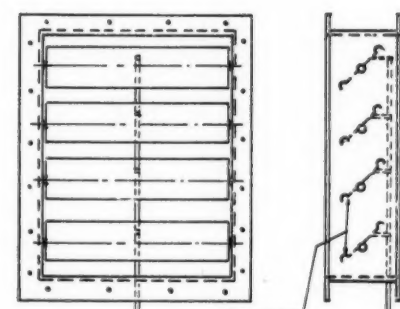
(f) - SPLITTER DAMPER.



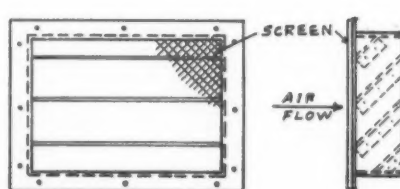
(g) - VOLUME DAMPER.



(h) - SQUARE ELBOW.

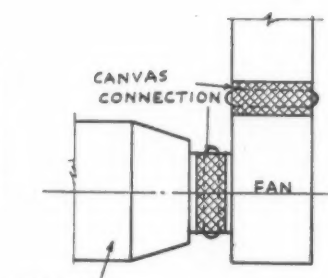


(j) - LOUVRE DAMPERS.



(k) - STATIONARY LOUVRES.

(l) - INLET SCREEN.



(m) - CANVAS CONNECTIONS.

Fig. 3—How various type dampers are employed in air conditioning duct systems is indicated in the sketches above. Shown also at lower right are the canvas connections which should be used at the inlet and outlet of fans to prevent vibration in the fan casing from being transmitted to the ductwork where it could create undesirable noise.

STYLED FOR PERFORMANCE

Larkin refrigeration products, made by the originators of Cross Fin Coils, combine industrial beauty with flawless performance. Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Evaporative Condensers—Air Conditioning Units—Instantaneous Water Coolers—and other top-ranking factors in industrial and commercial refrigeration.



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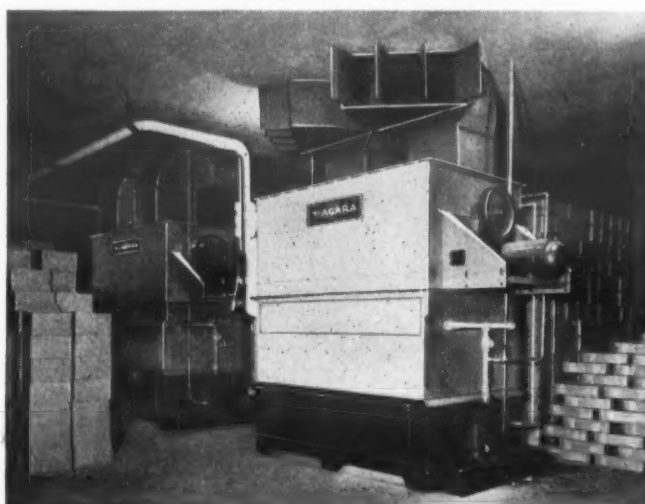
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Frozen Food Industry Told 'Get Out of Cadillac Class'

(Concluded from Page 1, Column 3)

pass the record pack of 1,900,000,000 pounds of fruits and vegetables of 1946.

The efforts to bring inventories back into balance resulted in cut-back to a production of 720,000,000 pounds of fruits and vegetables in 1947, while increased outlets among all users has restored the industry to a position of balance, he asserted. Despite the increases in food prices generally frozen food prices now tend to 15% lower than the last OPA ceilings, he pointed out.

Prince told the N.W.F.F.D. at its convention at the Congress hotel that the "smashing drop in frozen food prices and the steadily accumulating operating losses have put many distributors into a slightly apprehensive mood." He said "Many are worried about buying merchandise."

The "low level" of consumer acceptance, he claimed, "has created a situation where the average grocery stores sales in frozen food products is too small to make the distribution of frozen foods profitable" nor, he said, has consumer demand been large enough to afford a good profit to the retailer.

"Most of the industry's trouble starts with our poor selling job to Mrs. Housewife," he said. "All of these troubles can be corrected when a real selling job is bigger and continually carried on." One step in this direction was taken at N.A.F.F.D.'s annual meeting. The association voted to expand its consumer education program and to set up a public relations department within the organization.

A five-year, \$15,000,000 dealer and consumer education and promotion program proposed by the National Frozen Food Council was discussed during the convention. Differences of opinion reportedly developed over the plans and no immediate official action was taken by associations, as far as could be learned.

The proposed campaign to rapidly increase per capita consumption of frozen foods was outlined in a 22-page brochure distributed during the convention. It would be financed by contribution totaling \$7,500,000 from the frozen food industry over a five-year period and a like amount from allies such as refrigerator manufacturers and utilities.

In addition to expanding its consumer education program N.A.F.F.P. will launch a campaign for industry-wide acceptance of standard labeling practices. Results of a survey taken to determine current labeling practices were reported at the association's annual meeting.

This meeting was told of preparation for hearings on the setting of standards for frozen foods by the Food and Drug Administration. Hearings are scheduled to start in about six weeks.

F. J. Becker, special assistant to the vice president in charge of Pacific coast operations for Honor Brand Division of Stokely Foods, Inc., was elected president of N.A.F.F.P. H. A. Carpenter, president of Olney & Carpenter, Inc., Walcott, N. Y., was elected first vice president, and T. E. McCaffary, president of National Food Processing Co., Seattle, was elected second vice president.

During the annual meeting of N.W.F.F.D., William M. Walsh, of Morrison & McCluan, Pittsburgh, was elected president.

New Products Shown

Among products introduced at the exposition were handmade models of R. H. Bishop Co.'s new "Silverfreezer" line. The line includes 14 and 18-cu. ft. home freezers, a 22-cu. ft. low-temperature storage cabinet, an 18-cu. ft. open display freezer in both wall and aisle types and a 22-cu. ft. high-temperature open display case, also in both wall and aisle types.

These models will be made with

stainless steel exterior, plastic doors, lids, and superstructures, and aluminum interiors. The firm will also produce 14 and 18-cu. ft. home freezers in baked white enamel. Production of these units is scheduled to start about May 1.

PLANS 7-FT. REFRIGERATOR

At the booth of Marquette Appliances, Inc., which displayed a home freezer and a frozen food display case, it was announced that the firm is now in production on a 7-cu. ft. domestic refrigerator, with delivery scheduled to begin about June 1. Household choices of other sizes are planned for further production, it was reported.

On display at the Authorized Cabinet Co. booth was the first production-line model of a 13½-cu. ft. frozen food cabinet said to hold 500 packages. It has five refrigerated divider plates plus another refrigerated plate in the bottom of a shallow compartment.

AUTOMATIC DEFROST FEATURE

Another new frozen food display case was shown by Select-O-Freeze Corp. of Milwaukee. This cabinet, which features an automatic defrost system, is said to hold about 500 packages. A representative said the firm is going into production of the case immediately and that it plans to manufacture other products in the low-temperature field.

New cabinet superstructures were displayed by Schaefer, Inc., and Whiting Corp. Refrigeration Corp. of America showed a new "Vitavision" 3-dimensional 20 by 24-in. color plate in the form of superstructures for frozen food departments of stores.

800-LB. TRUCK UNIT

Announced by U. S. Thermo Control Co. but not on display was the new Model "R" mechanical refrigeration units for trailers. Weighing 800 lbs. the one-piece unit is claimed to maintain subzero temperatures, remove field heat, and heat and cool. Production is just starting on the unit, which has a four-cylinder, liquid-cooled engine, and a direct-driven compressor, according to a spokesman.

G-E '47 Volume Hit \$1-1/3 Billion Mark

SCHENECTADY, N. Y.—On net sales of \$1,330,776,375, representing a physical volume of output more than double that for the prewar peak year of 1940, General Electric and its consolidated affiliates realized a net profit available for dividends for the year 1947 of \$95,298,940, or \$3.30 a share of common stock, President Charles E. Wilson has announced recently.

The previous record earnings, realized by the parent company in 1929 on a sales volume of only \$415,300,000, were equivalent to \$2.24 a share of present common stock.

Pointing out that the 1947 profit rate was equivalent to 7.2 cents on each dollar of sales, or 38% less than the average rate of 11.6 cents earned on the sales dollar in the eight-year period ended with 1941, Wilson stated

"The company has continued its long established policy of selling its products at the lowest possible prices consistent with the yield of a reasonable profit. This means that General Electric's prices were not, as a matter of policy, permitted to keep pace with the increased cost of operating the business.

"On a weighted basis, the selling prices of all General Electric products averaged only 33% higher in 1947 than in 1940 and had increased less than half as much since 1940 as the prices of all manufactured products as measured by the index of the U. S. Department of Labor."

In Norge Field Shift



J. W. Webster



C. H. Alden

DETROIT—The Norge division of Borg-Warner Corp. has realigned and added to its field staff, reports H. L. Clary, general sales manager.

C. H. Alden, formerly west coast district representative, has been made midwest regional manager with headquarters in Chicago. He will be assisted by Russell F. Cates and Charles Marvin, district representatives.

J. W. Webster, who was acting regional manager in Chicago, has been made central regional manager and will move his headquarters to Detroit. He will be assisted by W. C. Gordon.

Dept. Store Sales Up In First March Week

WASHINGTON, D. C.—With an early Easter approaching, department store dollar sales across the nation for the week ending March 6 reflected a 4% increase over the same period of 1947. Only Boston (where volume was down 8%) failed to gain.

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to start production on income producing refrigeration item with known market potential. Our plant already completely equipped. One of three competitors in nation. 90% of dealers are without a line of this type. Orders already on hand. If interested in a good proposition, write this old, established manufacturer located in south-eastern Pennsylvania.

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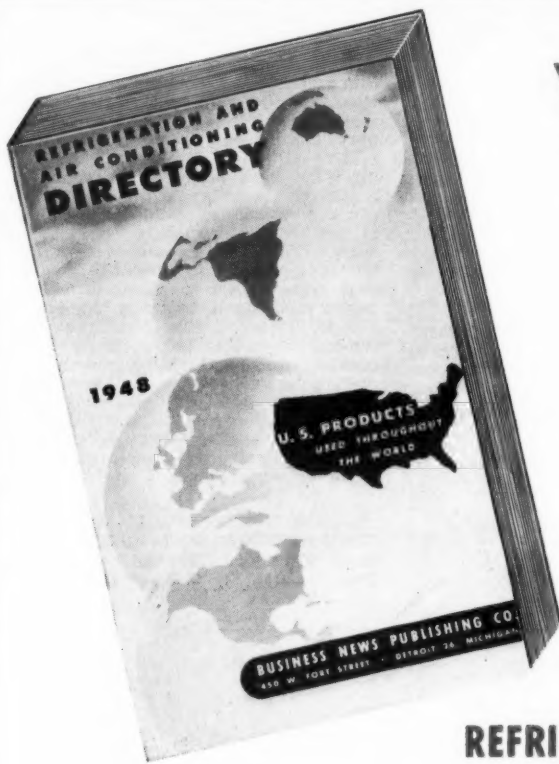
Air Conditioning & Refrigeration News

WHO MAKES:

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FLORIST DISPLAY CASES?
TUBING AND VALVES?
INSTRUMENTS AND CONTROLS?
HOME AND FARM FREEZERS?
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NEW 1948 EDITION OF THE REFRIGERATION AND AIR CONDITIONING DIRECTORY



The Directory lists each refrigeration and air conditioning product, followed by the names and locations of all the companies producing the article. All manufacturers are also listed alphabetically, together with their company address, and there is a separate section devoted to Trade Names. Other sections list manufacturers, refrigeration parts wholesalers, schools and associations geographically. Manufacturer's listings include executive personnel, summary of their products, and phone numbers. The Directory is book-size, 6" x 10", durable and completely indexed for your convenience. A quick and accurate reference book which will save you many hours in your search for names, products, addresses, and phone numbers. 324 pages of listings and informative advertising. In nine well organized sections, makes this 1948 Directory a buyer's guide you can use profitably. Order your copy today.

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Wire St. Louis 10, Mo.

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JE 4374

PATENTS

Week of December 23
(Continued)

2,433,211. ICE CUBE TRAY. Joseph A. Gits, Chicago, Ill., assignor of one-half to Jules P. Gits, Chicago, Ill. Application Sept. 5, 1947, Serial No. 772,390. 2 Claims. (Cl. 62-108.5.)



1. An ice freezing tray comprising a body formed of individual compartments, each having tapered side walls integrally formed with each other and with a bottom wall, the side walls of adjoining compartments being joined together along their top edges, all said walls being formed of polyethylene having wax-like surfaces substantially non-wettable by water and to which ice will not adhere, said material yielding under tension to the expansion of the ice upon freezing in each compartment, said tapered walls being of a thickness ranging from .025 to .110 of an inch and being bowed outwardly by such expansion, said polyethylene wall structure due to said thickness producing a retractile force sufficient to return the bowed walls to normal condition and to eject the cubes from said compartments when the bowed walls are disturbed by manual flexing.

AVAILABLE FOR LICENSING OR SALE

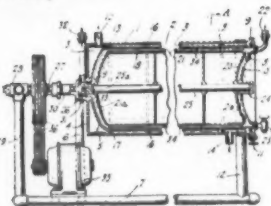
Pat. 2,413,454. **VENDING MACHINE.** Patented Dec. 31, 1946. Coin-operated machine dispenses ice cream bars. Bars are stacked in refrigerated compartment over a platform having spaced guide rails and a U-shaped strap fastened horizontally to sides of a wheeled plunger and sized to accommodate one bar. When inserted coin unlocks mechanism, inclined top surface of plunger separates lowest bar, raising stack to jar apart frozen bars and dropping lowest bar upon guide rails within confines of chute. As bar is pushed forward onto a chute, a spring returns plunger to position. (Owner) Ival E. Kidwell, 6053 Ethel Ave., Van Nuys, Calif. Group 35-73. Reg. No. 8,946.

Week of December 30

2,433,348. METHOD OF PROCESSING FOODSTUFFS. John C. Donnelly, Greenwich, Conn. No Drawing. Application May 18, 1943, Serial No. 487,495. 2 Claims. (Cl. 99-192.)

2. The method of processing a dehydrated foodstuff including the steps of refrigerating the foodstuff to a temperature between about 32° F. and -45° F. at which fats and similar low melting point constituents of the foodstuff will remain substantially solid under a powerful "binding" pressure but at which fractionation and disruption of the foodstuff under the "binding" pressure will not occur; and, subjecting the foodstuff while in its refrigerated state to a powerful "binding" pressure between about 300 pounds per square inch to about 5,000 pounds per square inch but sufficient only to compact the foodstuff and bind the foodstuff into a compact readily friable non-corneous integrated unit without material or substantial change in the structure of the foodstuff.

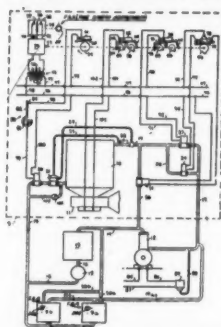
2,433,475. APPARATUS FOR CONTINUOUSLY COOLING LIQUIDS, INCLUDING LIQUEFIED FATS, OILS, OR THE LIKE. Henry Lamont Murray, Auckland, New Zealand, assignor to Murray Deodorisers Limited, Auckland, New Zealand, a company of New Zealand. Application Feb. 15, 1943, Serial No. 476,024. In New Zealand March 18, 1942. 6 Claims. (Cl. 62-114.)



1. An apparatus for continuously cooling liquids including liquefied fats, oils or the like, said apparatus comprising a container formed by a cylindrical shell having one end preferably integral with the

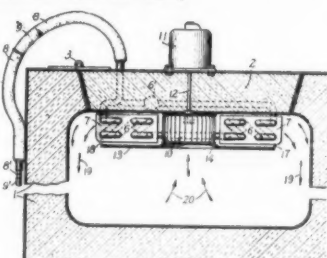
body portion of the container and the other end formed by a removable cover, a jacket disposed around the cylindrical shell and over the integral end of the container, a cooling agent inlet and outlet to said jacket, means within said jacket to cause the cooling agent to pursue a circuitous route in travelling from said inlet to the outlet, glanded bearing means extending from the integral end of the container, a bearing in the removable cover, a second cylindrical shell closed at both of its ends having a shaft projecting from said ends by which it is rotatably supported in such manner within the container as to leave a cooling space between its outer surface and the inner surface of the container, an inlet, an outlet and a drain to said cooling space, means secured to the outer surface of said second shell disposed at intervals apart and projecting into the said cooling space and closely approaching the container, one end of said shaft being removably journaled in the bearing in the removable cover, a drive shaft extending through the glanded bearing, power means for driving same and means removably coupling said drive shaft with the first-mentioned shaft whereby power may be transmitted to the second cylindrical shell while also permitting withdrawal of said last mentioned shell from the container on the cover being removed therefrom.

2,433,574. HOT GAS DEFROSTING. Alvin B. Newton, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application April 30, 1942, Serial No. 441,127. 17 Claims. (Cl. 62-115.)



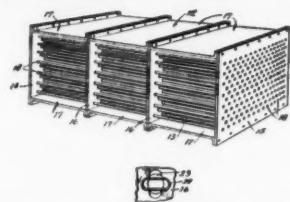
1. In apparatus of the character described, in combination, means forming a refrigerating system including an evaporator and a source of refrigerant supply normally connected in refrigerant flow relationship, said source being capable of supplying hot refrigerant, defrosting apparatus comprising means for closing the liquid and suction lines of the evaporator so that said gas may condense in the evaporator for defrosting it, and means forming a relatively restricted orifice connecting said source and evaporator by which refrigerant used for defrosting is withdrawn from the evaporator and returned to the inlet of said source, the restricted orifice acting to prevent refrigerant in liquid form from returning to said inlet.

2,433,655. QUICK-FREEZE UNIT. Mario di Zoppola, New York, N. Y., assignor, by mesne assignments, to Reconstruction Finance Corp., New York, N. Y., a corporation of the United States. Application Jan. 26, 1945, Serial No. 574,706. 7 Claims. (Cl. 62-115.)



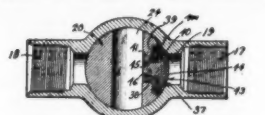
1. A low temperature device including a chambered cabinet having an opening extending into the interior thereof, a removable closure for said opening, a cooling device, a circulation fan, means for directing the flow of air from said fan over said cooling device and within said cabinet, all of said elements being carried on the inner side of said closure, means for supplying fluid to said cooling device, means responsive to the temperatures within the chamber of said cabinet for controlling the joint operation of said fan and said means for supplying fluid to said cooling device, and manually controlled means for controlling the operation of said fan independently of the last-named means whereby said fan may be continued in operation when the closure is removed for defrosting of the cooling device.

2,433,731. PROCESS OF MAKING HEAT TRANSFER UNITS. Howard F. Brinen, Racine, Wis., assignor to Young Radiator Co., Racine, Wis., a corporation of Wisconsin. Application Aug. 20, 1945, Serial No. 611,518. 2 Claims. (Cl. 29-157.3.)



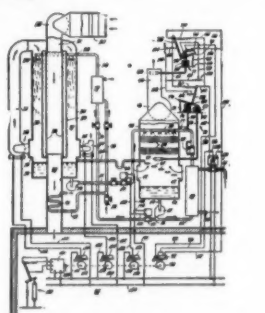
1. The process of constructing a heat exchange unit which comprises, forming a pair of header plates each with circular perforations therein, forming one or more intermediate reinforcing plates having a longitudinal and transverse series of concentrically intersecting circular and non-circular perforations, forming a plurality of tubes of non-circular cross-section intermediate circular ends and a circular middle portion, passing the tubes through said reinforcing plate by aligning the non-circular parts of said tubes with the non-circular parts of said perforations and bringing the middle circular portion of said tubes into registration with said reinforcing plate and thereupon turning said tubes to disalign said non-circular part of said tubes with the non-circular part of said perforations, seating the circular ends of the tubes in the circular perforations of one of said header plates, bonding the ends of said tubes to said one header plate, placing the second perforate header plate on a base member having mandrels corresponding in number with the perforations in said second header plate, inserting the mandrels into the other ends of said tubes, shifting said second header plate from said mandrels onto the other ends of said tubes, removing said mandrel base member, and bonding said other tube ends to said second header plate.

2,433,732. VALVE. Clyde A. Brown, Chicago, Ill., assignor to The Dole Valve Co., Chicago, Ill., a corporation of Illinois. Application Aug. 27, 1943, Serial No. 500,206. 9 Claims. (Cl. 251-103.)



In a valve structure, a casing member having a valve bore therein and a port communicating therewith, a plug member rotatable in said bore into open and closed positions with respect to said port, one of said members having a generally circular recess therein in the interface area between the members and on an axis angular to the axis of rotation of the members, and annular sealing means of substantially circular cross-section disposed in said recess and deflectable under pressure to a generally oval cross-section to prevent leakage between said members when the plug member is in one of said positions by establishing a tighter fit between said plug member and said casing member as the fluid pressure at the port increases, and a circular retainer encircled by said annular sealing means and loosely maintaining the sealing means in place in said recess whereby the sealing means can move under pressure deflection.

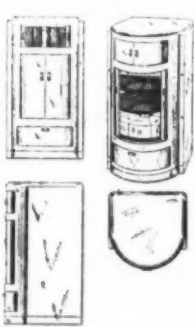
2,433,741. CHEMICAL DEHUMIDIFYING METHOD AND MEANS. Robert B. Crawford, Miami, Fla. Application Feb. 13, 1943, Serial No. 475,777. 13 Claims. (Cl. 183-2.)



9. An air dehumidifying system, comprising, in combination, means forming a pair of chambers having a wall portion therebetween, said wall portion including means which relatively freely permits the passage of vapor molecules therethrough while restricting the passage of air, means for passing air through one of said chambers, means for spraying brine into the other of said chambers, means to recirculate the brine mist resulting from the spraying of the brine through the brine chamber at high velocity, means to reduce the pressure in said brine chamber, and means responsive to a reduction in moisture content of the air leaving said one chamber to sequentially render said pressure reducing means ineffective and then stop said recirculating means.

DESIGN

148,212. DESIGN FOR A COMBINATION REFRIGERATOR AND FOOD FREEZING UNIT. Alfred O. Boyce, Minneapolis, Minn., assignor of one-third to Helen A. Downing, Minneapolis, Minn. Application March 6, 1946, Serial No. 127,172. Term of patent 14 years. (Cl. D67-3.)



The ornamental design for a combination refrigerator and food freezing unit, as shown.

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DO YOU have a help problem? Let us solve yours. Available—well trained selective men. These men have completed a course of 34 weeks consisting of practical shop refrigeration. Send for our records. Well trained men for a good job. Available for all parts of the country. **THE ST. LOUIS SCHOOL FOR ELECTRICITY AND REFRIGERATION, INC.** 6767 Southwest Avenue, St. Louis, 17, Mo.

REFRIGERATING SALES Executive available, comprehensive background of dealer relations, retail sales, application engineering, market equipment, modernized layouts and design, unitized air conditioners, purchasing and expediting. Vicinity New York City, New Jersey or New England. Consider manufacturers' representative. Age 33. BOX 2736 Air Conditioning & Refrigeration News.

SALES ENGINEER college graduate, 15 years experience in commercial condensing unit packaged and central type air conditioning unit, desires sales promotion position in Southern California, where he has good contacts and experience. Excellent references. BOX 2745 Air Conditioning & Refrigeration News.

SALES ENGINEER, 12 years experience in air conditioning and commercial refrigeration desires sales or engineering work with reliable firm in or around Los Angeles. Capable of laying out own jobs and helping with installation. Best references. BOX 2746 Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

COMMERCIAL AND industrial refrigeration and air conditioning installation and servicemen with at least 3 years experience. 40 hour week, company trucks furnished, \$1.80 to \$2.00 scale. **DRESCO REFRIGERATION COMPANY**, 4404 Woodward, Detroit 1, Michigan.

EXPERIENCED COMMERCIAL salesmen for York self-contained air conditioners and York commercial full line. Earnings \$5,000 to \$10,000. Must have car. All Northern New Jersey. Apply or write: **ELECTRIC PRODUCTS, INC.**, York Distributors, 106-112 Nelson Ave., Jersey City, New Jersey.

WANTED: SALES Representative to sell refrigeration, air conditioning and electrical supplies and equipment to dealers within a radius of 150 miles of Davenport. **REPUBLIC ELECTRIC COMPANY**, Davenport, Iowa.

ELECTRICAL ENGINEER, to assume full responsibility of testing laboratory and research program. Must be familiar with A.S.R.E. wind tunnel testing and N.E.M.A. air movement checks. Knowledge of small shaded-pole motors and refrigeration desired. Write, stating qualifications and previous experience. BOX 2702 Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVES wanted by manufacturer of nationally advertised line of Electric Water coolers. Choice territories available. Write stating qualifications, dealer and distributor contacts. BOX 2737 Air Conditioning & Refrigeration News.

WELL ESTABLISHED Metropolitan New York refrigeration supplies jobber has opening for experienced salesman with following. Write full details and qualifications in first letter. Salary will be kept confidential. BOX 2744 Air Conditioning & Refrigeration News.

FIELD SERVICE Representative wanted by large Midwest appliance manufacturer. Former distributor service manager or person with field service experience. Free to travel small territories. This is an excellent opportunity with unlimited possibilities for advancement. Write, stating complete history, references, background and experience. Replies held confidential. BOX 2747 Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION Serviceman—For aggressive sales and service company located in Northern Ohio. Experience in commercial and air conditioning. Union wages. BOX 2750 Air Conditioning & Refrigeration News.

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NEW GENERAL Electric motors, 1 1/2 HP. 1800 R.P.M. 230 volts 1 Ph. 60 cycle. High starting torque. Constant duty sleeve bearing. List \$88 less 20%. Also in stock 1/4 to 1 HP. **EDISON COOLING CORP.**, 310 East 149th St., New York City, N. Y.

QUALITY BOBTAL fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with

machines. Equipment made to special order. **FRIGITEMP CORP.**, 931 Bergen St., Brooklyn 16, MA 2-9093.

FOR SALE at reduced prices, 2-tap all stainless steel direct draw boxes complete with blowercoil \$275 F.O.B. Chicago, Illinois. 3-tap all stainless steel direct draw boxes complete \$340. **GEORGE HILGER CO. INC.**, 8444 So. Racine, Chicago, Illinois.

FOR SALE two (2) 5 ton second hand Chrysler high and low sides air conditioners complete. Bids acceptable at the **KOOLERAIRE CONDITIONING COMPANY**, 55 West 42nd Street, New York, N. Y.

JACK & HEINTZ fractional horsepower motors. Complete line of various sizes: 1/8, 1/4, 1/2, 3/4, 1-110/220 AC 60 cycles; 115/230 AC 50 cycles. Available for immediate delivery. Maximum discounts. Export Dept., S. J. O'BRIEN SALES CORP., 560 West 34th Street, New York 1, N. Y. Telephone WI. 7-2100.

SEALED CROSLLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor or removing unit. No special tools required. Corrects leaky terminals on F-12 units. Short model 1020- for short Croslley terminals (F-12 compressors with 4 mounting legs). Long model 1020- for long Croslley terminals (F-12 compressors with 3 mounting legs). \$5.25 set of three. Immediate delivery. Money-back guarantee. **SEALED UNIT PARTS CO.**, 3097 Third Avenue, New York 56, N. Y.

COMPLETE SEALED units 1/4 H.P. for sale. Condensers are fan cooled. Complete with relay and charging valves \$45.00. Lots of 10, \$40.00 each, F.O.B. New York. Dimensions are 15 1/4" long, 14 1/4" wide, 11" high. **TECHNICAL REFRIGERATION SPECIALISTS**, 362 East 180th Street, Bronx, N. Y.

(1) 4 1/2" O.D. Kerotest copper-to-copper straight-through suction shut-off valve. **TIDMARSH ENGINEERING COMPANY**, P. O. Box 2425, Tucson, Arizona.

IMMEDIATE DELIVERY from stock, FOB New York; new Delco fractional and integral motors; 1/4 HP. 17.92; 1/2-24.16; 3/4-37.08; 1-47.48; 1 HP-61.60. Complete stock of Delco industrial motors. **WHOLESALE DISTRIBUTORS, INC.**, 150-19 Liberty Avenue, Jamaica 4, N. Y. Jamaica 6-1733.

25-NEW 1 1/2 HP Universal units less/motors @ \$139.50 each. 12-New 1 HP Elpeco units less/motors @ \$117.50 each. 30-Ice Makers Peerless 6 trays, 16 3/4" W-17"H-15 1/2" D @ \$45.00 each. Write to BOX 388, DOYLESTOWN, PA.

BUSINESS OPPORTUNITIES

FOR SALE: Thriving refrigeration business located in Central California in the heart of San Joaquin Valley. Only refrigeration shop in this locality. Good commercial franchise's held. Ideal climate for year around business. Priced for quick sale due to other interests. Inquiries answered promptly and fully. Write **CORCORAN REFRIGERATION**, Box 164, Corcoran, California.

MISCELLANEOUS

ATTENTION JOBBERS—Manufacturers—Distributors. New mailing list covering every refrigeration service dealer throughout the 48 states. Complete list accurate, up to date. A new list sent clients each month. Service charge \$10.00 per month. Please order by check or money order. **JOSEPH J. HOLLWIG**, 829 Bushwick Avenue, Brooklyn 21, N. Y.

ICE PLANTS 3 to 80 ton Capacity. Freon or Ammonia. Diesel or Electric. Available with Air Agitation Equipment for Clear Ice & Ice Storage Room Equipment. 120 Day Delivery.

BULK ICE MAKERS 250 to 2000 lb. capacity Electric Motor, Gasoline or Diesel Engine Driven Units. Prompt Delivery.

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Frozen food locker manufacturer now doing a substantial volume of business in ten midwestern states is looking for a man to represent them exclusively in that territory. Experience in calling on and working with dealers who specialize in frozen food locker plant equipment and construction is to be desired. Salary and expenses to a man with car residing in midwest. Write full details as to past experience.

Howard A. Trafton, Safe-Way Food Locker Co., 175 W. Jackson Blvd., Chicago 4, Ill.

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Visitors Take 'New Look' at Parts Display As J. M. Oberc Lansing Branch Opens



Customers of the new J. M. Oberc, Inc. refrigeration supplies and equipment wholesaling establishment recently opened in Lansing, Mich., can't pick up "Jeanie," the young lady in the picture, but they can help serve themselves on the various items displayed on this shelving placed along the sidewalls. Joe Oberc, Detroit wholesaler who opened this new branch operation in Lansing, describes the store operation as being "semi-self-serve," this feature being confined to the parts, supplies, and tools that lend themselves to easy selection, and to reminder and "introductory" items.



(Photos by Austin Jones, Kerotest Mfg. Co.)
Joe Oberc (left), head of J. M. Oberc, Inc., and Bert Smith, who will manage the Lansing store, at the counter of the establishment which has some innovations in display and stocking arrangements.

Production of Heavy Refrigeration Equipment Remains High In N. Y.

NEW YORK CITY—Heavy refrigeration equipment is one of the few items of industrial equipment manufactured in the area around New York City on which production rates have not been reduced rather severely in the last few weeks, according to a *New York Times* story.

In individual industries the following conditions now exist, according to industry spokesmen, the *Times* story stated:

Automotive service station equipment, down 30 to 70% compared to 1947; smaller types of construction equipment, down 20 to 30%; tool and die-making shops, down about 25% from 1947 levels; railroad supply equipment, down 20%; foundries, off 25%; small varieties of power plant equipment, off 25%; machine tools, about 35% below expected levels.

Types of equipment for which large backlogs continue are varieties of machines which have traditionally required long-term production planning, state spokesmen for locomotive, larger refrigeration, railroad car, tractor, and electric generator equipment manufacturers stressed.

Ehlers Named Head of Twin Cities Commercial Contractors Association

MINNEAPOLIS — New officers were installed and six new companies inducted into membership at a recent meeting of the Twin City Commercial Refrigeration Contractor's Association.

New officers are Jack C. Ehlers, of Commercial Refrigeration Co., St. Paul, president; Joe Parupsky of Automatic Refrigeration Co., Minneapolis, vice president; Max Hoemke of Cherokee Refrigeration Co., St. Paul, secretary; Phil Herman of Allied Refrigeration Co., Minneapolis, treasurer.

New members of the board of directors are Art Palen of Palen Refrigeration Co., St. Paul, and Don Franks of Franks Refrigeration Co., Minneapolis.

The six new companies which received membership in the TCCRCA included Caldwell Refrigeration Co., and Holmsten Refrigeration Co., both of St. Paul, and Artic-Aire, Refrigeration Equipment Co., Martins, and Minneapolis Showcase & Fixture Co., all of Minneapolis.

Distributor Flies Salesmen East for Training



As part of its training program, the E. H. Schaefer Corp., Milwaukee distributor for G-E, has conducted a meeting for its sales counselors every week for the past three years. The firm intends to continue this policy indefinitely. As a supplementary measure, Schaefer recently flew its men to the G-E Consumer's Institute for further study of appliances and production methods. E. C. Zabor, vice president-general manager (extreme right), bids the group farewell. With him are: (left to right) H. G. Bauer, L. E. Peterson, W. B. Colvin, J. F. Effinger, C. C. Coulter, and R. C. Daly.

Booklet Features Kitchen Layouts, Wiring Diagrams

PITTSBURGH — Wiring diagrams and kitchen layouts for the two Industry Engineered Feature Houses developed by the Producers' Council and sponsored by the National Association of Retail Lumber Dealers are given in a 12-page booklet announced by Westinghouse Electric Corp.

Various kitchen plans for both the L-shaped and the two-story feature houses meet recommended cabinet and counter surface requirements. Wiring diagrams provide plenty of circuits, properly placed outlets and switch controls, and modern circuit protection. The booklet gives specifications and dimensions for refrigerators, ranges, water heaters, sinks, cabinets, and other equipment.

Copies of the booklet (B-3979) may be secured from the Better Homes Bureau, Westinghouse Electric Corp., P. O. Box 868, Pittsburgh.

Victory Appoints N. Y. Agent

PHILADELPHIA — Victory Metal Mfg. Corp., manufacturer of commercial refrigerators here, has announced the appointment of Dubov Sales Corp. of New York City as its direct factory representative for the metropolitan New York area.

Servel Traveling School Will Cover Servicing Of Supermetec Units

EVANSVILLE, Ind.—A series of service schools aimed at providing distributor and manufacturer outlets with complete information on Servel Supermetec condensing units has been recently inaugurated by Servel, Inc., Electric Refrigeration Division.

First of the meetings have been held during recent weeks in southern areas, and during the next two months others have been scheduled to cover midwestern, northern, and eastern sections of the country, according to George S. Eager, service manager of the Electric Refrigeration Division. Service personnel of allied fixture manufacturers, as well as Servel distributor and dealer representatives, are being invited to attend the sessions.

Included in the training programs are performance demonstrations, discussions of internal construction of the unit, electrical characteristics, and how to select and apply the condensing unit for the most satisfactory operation. The importance of the serviceman's ability to stimulate customer confidence and thus better his own position and maintain acceptance of the product is also emphasized.

Participating in the meetings are T. E. Parr, Servel field service supervisor; J. A. "Jim" Madden and Frank Jaeger, field service engineers, assisted by the district managers in each territory.

19 Outlets To Handle Ultra-Cold In 6 States

LOS ANGELES—Ultra-Cold, Inc. here announces the contracting of the following outlets who will handle Ultra-Cold products:

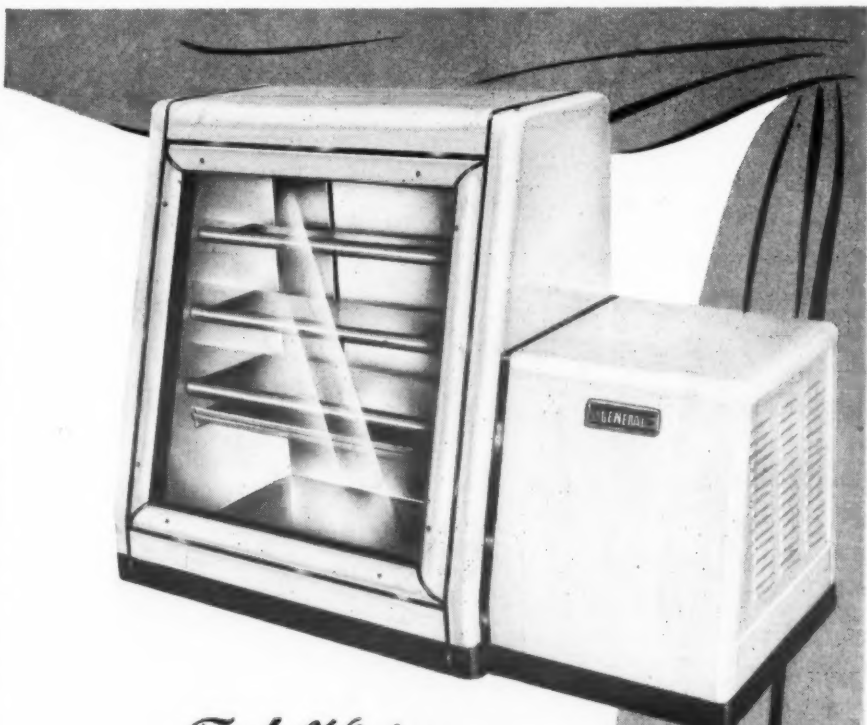
Clemons Brothers, Chattanooga, Tenn.; J. & J. Refrigeration, Los Angeles; Bell Electric, Bell, Calif.; Manchester Refrigeration, Los Angeles; Modern Home Appliances, Chattanooga; Osborn Furniture, Chattanooga; Pole Air Refrigeration, Los Angeles; Viking Sales Corp., Los Angeles; Aaron Schultz, Long Beach, Calif.; Styria Co., Ltd., Los Angeles.

Turner Electric, Chattanooga; Louis Jorgenson, San Diego, Calif.; Sampson Electric Sales Co., Los Angeles; Salee Refrigeration, Garden City, Kan.; Kimble-Robertson, Santa Fe, N. M.; Pacific Refrigeration, Lynwood, Calif.; McBride Refrigeration Service, Bell, Calif.; Roussell Appliance Co., Gretna, La.; S & F Refrigeration Co., Corpus Christi, Texas.

Motor Order Backlog To Keep Westinghouse Operations Up

BUFFALO—Westinghouse Electric Corp.'s backlog of unfilled orders for motors will insure capacity operations here for nine or 10 months, according to Buffalo Manager Leon R. Ludwig.

Westinghouse has revised to 7,000 its employment goal for the local plant. The peak number of workers had been placed at 6,500. The plant now employs about 6,300 workers and is hiring 30 to 35 a week.



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both self contained and remote
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RAPID Refillable DEHYDRATORS

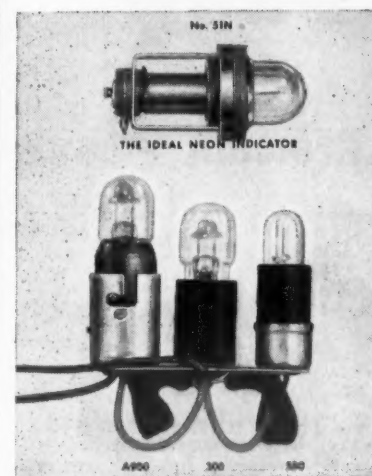
... really dehydrate; balanced dimensions; maximum dispersion area; thorough contact with silica gel. Sturdy, one-piece, leak proof shell, triple sealed, truly non-collapsible. Removable, large area, finger type screens permit complete cleaning, prevent damage.

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DRAKE
MANUFACTURING CO.
1705 W. HUBBARD ST., CHICAGO 22

Candian R.S.E.S. Meeting Opens March 30-- Corey New District Manager for Servel

(Concluded from Page 1, Column 3)
absolute zero by another Toronto university man.

On the service and installation side, the talks listed are:

"Solids In the Refrigeration System," by Dr. Walter O. Walker of Ansul Chemical Co.;

"The Proper Application of Dryers," by Ken Newcum of Remco, Inc.;

"Refrigeration Oils," by Dr. Edgar S. Ross of the Sun Oil Co.;

"The Control of Refrigerants to Obtain Temperature," by Ed Kellie of Aminco Refrigeration Products, Inc.

In addition, Harry Parish, editor of the *Canadian Refrigeration Journal*, will conduct his regular feature of "Information Please" at both afternoon sessions.

The complete program follows:

Tuesday, March 30

9 a.m.—Registration.
10 a.m.—Opening remarks by President A. J. Pike.

10:30 a.m.—Introduction of international officers; response by H. T. McDermott; remarks by International President Wm. Marshall of Toronto; secretary and treasurer reports.

11:15 a.m.—Appointment of nominating committee.

12:30—Commercial members luncheon. Guest speaker—Harold G. Stern, president, Refrigeration Equipment Wholesalers Association.

2 p.m.—"Solids In the Refrigeration System," by Dr. Walter O. Walker.

2:45 p.m.—"The Proper Application of Dryers," by Ken Newcum.

3:30 p.m.—Information Please, conducted by Harry Parish.

4 p.m.—Educational chairman's meeting.

8:30 p.m.—Monte Carlo party, Crystal Ballroom.

Wednesday, March 31

10 a.m.—Films—"Magic of Fluorescence" and "Magic of Science" presented by Jack Grant of Canadian General Electric Co.

10:30 a.m.—"Refrigeration Oils," by Dr. Edgar S. Ross.

2 p.m.—"The Uses of Refrigeration In Medicine and Surgery," by Dr. E. A. Sellers.

2:45 p.m.—"The Control of Refrigerant to Obtain Temperature," by Ed Kellie.

3:30 p.m.—"Behavior of Materials Near Absolute Zero," by Dr. A. B. Misener.

4:15 p.m.—Information Please, by Harry Parish.

7 p.m.—Annual dinner-dance, sponsored by the Ontario Maple Leaf chapter, Crystal Ballroom.

Schmidlin To Handle Worthington Lines

HARRISON, N. J.—Appointment of Schmidlin Bros. Heating Co. of Toledo as distributor for Worthington air conditioning and refrigeration equipment in the company's area, has been announced by Worthington Pump & Machinery Corp. here.

The distributor, who has been in the heating field for 35 years, will handle Worthington packaged air conditioning units, ammonia compressors to 5 x 5, and "Freon" compressors to model 3HF6.

NEW YORK CITY—James J. Corey has been appointed Servel district manager for the middle Atlantic states, comprising metropolitan New York, New Jersey, Delaware, eastern Pennsylvania, Virginia, and the District of Columbia, it has been announced by Harry F. Bell, field sales manager of Servel's Electric Refrigeration Division.



James J. Corey

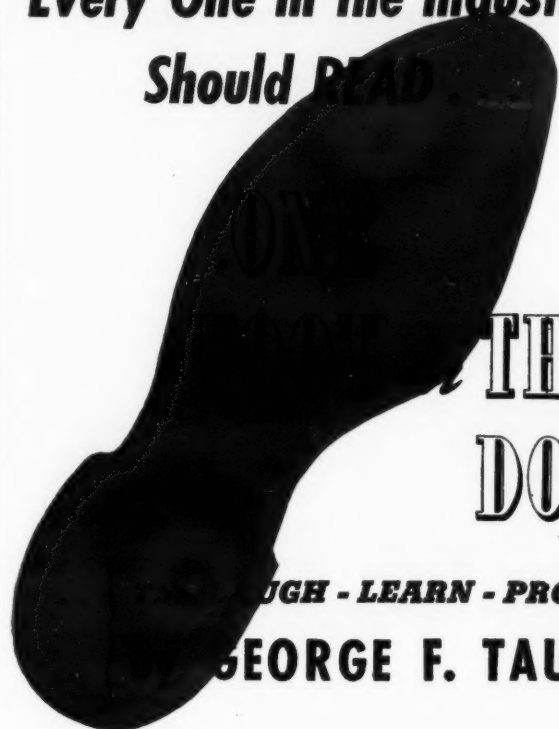
Corey has been associated with the refrigeration industry in various engineering and sales capacities for the past 25 years. He was with the Cordley & Hayes Co. 12 years as chief engineer. In 1945 he was chairman of the New York section of A.S.R.E., and is also a member of the Society of Naval Architects and Marine Engineers. He is the author of a number of technical articles published in refrigeration trade magazines.

In his new position, Corey will make his headquarters at the company's New York office, 51 East 42nd St.

New Elmira Dealer

ELMIRA, N. Y.—Don Wright, Inc., a new electrical appliance store, has been opened at 230 S. Main St. The store carries a complete line of large and small appliances and maintains a service shop.

Every One in the Industry Should Read



THE DOOR

UGH - LEARN - PROFIT BOOK
GEORGE F. TAUBENECK

... Because Every Laugh Drives Home a SOUND SALES PRINCIPLE!

"This is a funny book," declares George Taubeneck, editor of *Air Conditioning & Refrigeration News*, in his heading for Chapter 1. That's true. You'll laugh! You'll learn, too.

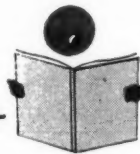
"One Foot in the Door" is the laugh-and-fact-packed story of Specialty Selling. It takes you back through chuckling pages to the birth of the specialty merchandising art under John H. Patterson of N.C.R. fame, and it takes you forward—again with smiles and guffaws—to the shining future.

It clearly delineates the selling principles which years of experience

have set up—and makes them easy to remember by associating these principles with humorous anecdotes. It vigorously points up the job ahead for sales management—tells what, where, why, when, and how.

It pleads eloquently for—and points the way toward—the more efficient distribution system that will be one of the strongest bulwarks of private enterprise.

It does all this so agreeably and fascinatingly that, when you finally finish it, you'll call it the most enjoyable book you've read in a decade.



CHAPTER TITLES from "One Foot in the Door"

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|---|--|
| 1. "This Is a Funny Book" | 12. "It Pays for Itself" |
| 2. The Old Master—and How He Got That Way | 13. Ask the Man Who Uses One |
| 3. Making Direct-Mail Advertising Respectable | 14. Everybody Loves a Convention |
| 4. Hair Grows on a Billiard Ball | 15. Sales Training Schools Must Be Clever and Entertaining |
| 5. Publicity Isn't Always Free | 16. Circuit Riding Becomes a Profession |
| 6. People See Better Than They Hear | 17. Make It Clear, Make It Simple, Make It Direct |
| 7. How to Humanize Your Company | 18. Just a Minute, Dear |
| 8. Tom Thumb Cartels | 19. Five Will Get You Ten |
| 9. Finding the Rainbow's Pot-of-Gold | 20. Mama Can Help, Too |
| 10. There's Always One Best Way to Tell Your Story | 21. Ask the Man Who Does the Work |
| 11. You Can't Get Off First Base Without a Sales Manual | 22. Factory Open House Policy |
| | 23. Who Says You Can't Sell Abroad? |
| | 24. "Tell All" Promotion Rings the Bell |

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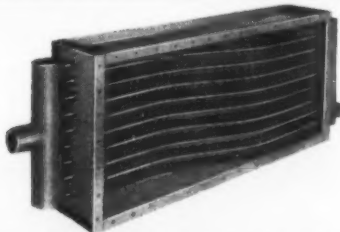
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